NATIONAL AERO CONVENTION NUMBER

AVIATION

OCTOBER 22, 1923 Issued Weekly PRICE 10 CENTS

Some of the contestants' and visitors' planes at St. Louis airport

VOLUME XV

NUMBER 17

SPECIAL FEATURES

N.A.A. ANNUAL CONVENTION

N.A.A. BANQUET A GREAT SUCCESS

THE NEWLY ELECTED OFFICERS OF THE N.A.A.

REVIEW OF THE AIR MAIL NIGHT ELYING TRIALS

THE GARDNER, MOFFAT CO., INC.
HIGHLAND, N. Y.
225 FOURTH AVENUE, NEW YORK

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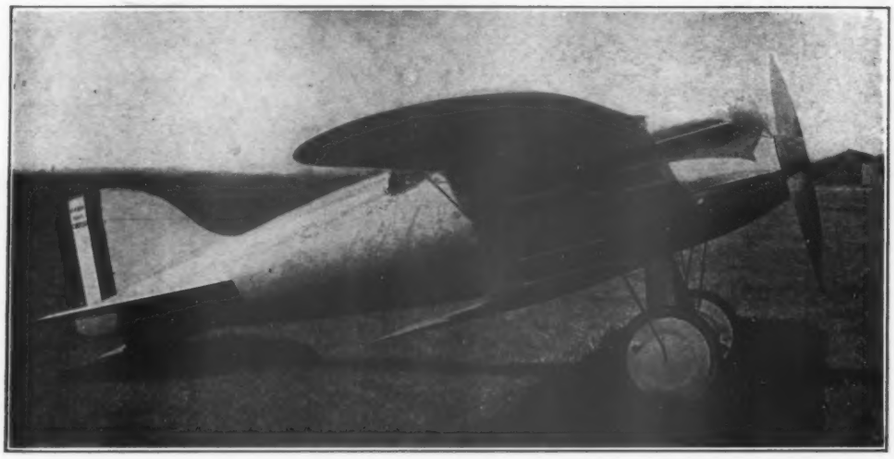

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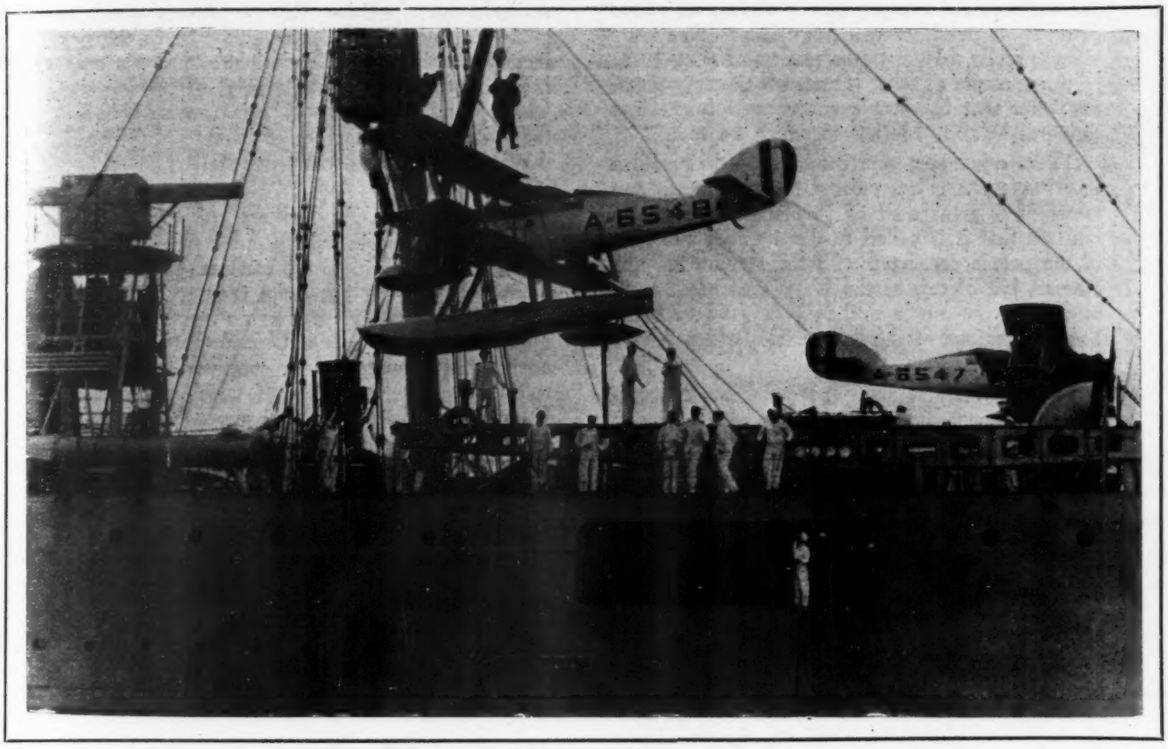

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Long Island City, New York

The Publisher's News Letter

From time to time many facts of interest to our readers come over the publisher's desk or are learned while members of the staff are visiting the industry. Some of these stories are not properly of editorial interest but have a value all their own for our readers. Hoping that it will be an added feature, the publisher will from time to time write what is really a letter to the readers of AVIATION.

An example of what is meant is the very pleasing letter that has just been received from Rear Admiral W. A. Moffett in which he says:

"I have just seen your comment on the bombing in AVIATION. It has pleased me very much, and attracted a great deal of favorable comment. I will see that it is called to the attention not only of the people connected with the Bureau and the Service, but officers of the Navy generally. I am also using your article on the ZR1. As I told you, I think it is one of the best articles which I have seen on the subject."

It is gratifying to know that a subject that contained so much T.N.T. could be handled in an acceptable way. AVIATION always takes the point of view of the airman first and the older Service secondarily. By so doing, it is fulfilling its position as an exponent of the prime importance of aircraft. Admiral Moffett's generous praise is greatly appreciated.

* * * *

In *The Aeroplane* of September 12, the Editor, Mr. Charles Grey prints a congratulatory message on the entrance of AVIATION into its eighth year of service to American aviation. Much of the flattering comment is too personal to be reproduced here but it is a great satisfaction to know the high respect AVIATION receives abroad, particularly from a contemporary which is as discerning as *The Aeroplane*. The following excerpt may be given to our readers with an expression of the hope that in spite of our many omissions we may continue to merit the confidence of those who are truly interested in the basic principles of sound aeronautical progress:

"One would like to take this opportunity of congratulating all concerned with that excellent paper on the good work which it has done.

"AVIATION is now the oldest aeronautical publication in the United States and it is the only weekly one that has survived.

"Quite a number of aviation papers have existed at one time or another in the States. Those pioneer papers died and so did the more flamboyant efforts which appeared during the wartime boom of aviation.

"Consequently, AVIATION remains the only regular weekly free and independent aeronautical paper in the United States. It has always been remarkable for its cleanness in fighting and its impartiality on all controversial subjects. The paper and printing has been such as to rouse one's envy every time the weekly copies of AVIATION have arrived. Mr. Ladislas d'Orcy is very much a pioneer of aviation. His knowledge of aeronautics including both heavier and lighter than air craft is encylopedic and he has a habit of taking pains which result in AVIATION being remarkable for the quite unusual accuracy of its facts and figures, that is to say unusual where any kind of journalism is concerned.

"The contributing editors of AVIATION, Messrs. Virginius E. Clark, Edward P. Warner and Ralph H. Upson are each in his own line authorities so that it is quite easy to understand how it is that AVIATION has not merely survived all its competitors in the United States, but has acquired and maintained a reputation for accuracy, truthfulness and reliability of which the greatest journals might be proud. One hopes that for many years to come *The Aeroplane* may have the pleasure of congratulating AVIATION on its continued good work and that ere long the state of the American aircraft industry may become such that the proprietors and staff of AVIATION may reap that financial reward which judging by the advertisement pages of that excellent paper must obviously be lacking for the present."

Thank you, Mr. Grey. We reciprocate your good wishes and thank *The Aeroplane* for its many helpful messages of encouragement.

* * * *

"The state of the American aircraft industry" is a very significant part of the above congratulatory message. It is true that a trade paper reflects not only the state of the industry but perhaps equally the breadth of vision of the members of the industry. The advertising pages of AVIATION reflect the above condition. But the reasoning is not exactly according to logic.

Our aircraft industry, while at a low level could well afford to support its only trade paper. Some aircraft companies have done millions of dollars worth of business and yet when it comes to encouraging a medium of expression of their calling, they close their fists and allow the broad gauge constructors to get all the publicity. When it comes to free publicity, it is another story, as will be seen by reading aeronautical stories in the daily papers. Publicity and advertising are intended to create good will. Our readers can judge very accurately from the advertising pages of AVIATION those companies that deserve that very estimable and valuable asset.—L.D.G.

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AVIATION

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LADISLAS D'ORCY
EDITOR
VIRGINIUS E. CLARK
EDWARD P. WARNER
RALPH H. UPSON
CONTRIBUTING EDITORS

Vol. XV OCTOBER 22, 1923 No. 17

The N.A.A. Convention

THE first year of the National Aeronautic Association is completed and the record of the work achieved can now be reviewed with the perspective of distance and unclouded by the obvious mistakes that are to be expected in organizations undergoing the throes of making policies along new lines for a very loosely constituted national group.

As most of the work for the year resulted from the interest and support of the President, Howard Coffin, and the personal supervision of the Vice-President, B. H. Mulvihill, to them should be given the credit for the accomplishments of the year. It is well to take a generous point of view in clearing the memory of the mistaken policies or the misdirected efforts. No new organization ever started without them and the N.A.A. was no exception. The report of the Vice-President gives clearly the amount of work done, and while the President's generosity is well known, it will take many years to fully value the investment that has been made in the foundations of an American aeronautic directing body. That the future will assess this patriotic endeavor at its full worth, no one who is acquainted with the facts will doubt.

While the size of the membership of the Association has been disappointing, it can be said that almost all similar efforts have met with resistance at first. Now that the Association has passed its first milestone, it will, with proper supervision, gain friends in all parts of the country.

The work of the Contest Committee has been of a very high order. Many difficult problems have been encountered and solved with the approval of everyone. The preparations for the St. Louis races and the handling of the events reflected credit on the ability of those in charge of this work of the Association.

The election of officers for the coming year was not accomplished without the usual differences of opinion. Perhaps the frank discussion on the floor of the convention will serve to express the general feeling of the various parts of the country and indicate the impression that has been created by those in charge. Certainly no one can ever claim that the work of the convention on its election of officers was the result of any prearranged plan.

Perhaps the most important action by the convention was the acceptance of a budget for the coming year. Last year, the budget was prepared without facts that can only be gained by experience to guide in its preparation. It was the general impression at the convention that the extravagancies of the first year should not be repeated. This budget is based on the first year's expenditures. It was prepared by men fully acquainted with the work of the Association, its requirements and scope. It was adopted by the convention and should be strictly adhered to by the officers for the coming year. No matter how great the temptation to accept contributions to increase the budget, it should be avoided. If the N.A.A. is to become a truly representative association it should not be supported by one or two generous benefactors. This phase of the Association's activity will be more closely watched than any other.

The new officers are men who have the best interests of American aviation at heart. Mr. Patterson, the new President, like his father before him, has been intensely interested in the advancement of aerial preparedness. His well known organizing ability and broad interests are fine qualities to have at the disposal of a national organization. Ralph H. Cram, Col. B. F. Castle and Dudley Outcalt, the other officers, have been intimately connected with the work of the Association since its inception. Their experienced guidance will be invaluable.

Slow and steady progress, after an impatient start is in order. No more fitting suggestion can be made to those in charge during the coming year than that the Association be made truly representative of our aeronautical progress—slow but leading the world.

The Backbone of Our Future Air Fleet

THE NATIONAL AIR RACES of 1923 may well prove a turning point in the history of American aviation. All the pessimists who go around saying that "there is no commercial aviation because there are no commercial airplanes, and there are no commercial airplanes because there is no demand for them" should have been at St. Louis Air Field the first week of October. Perhaps the sight of the hundred odd *civilian* planes parked in one corner of the airport like a mighty armada would have opened their eyes. True, there are not many real commercial planes in existence as yet, and America's civil air fleet is still composed in overwhelming numbers of Jennies and kindred ships.

Nine out of ten civil ships are Jennies because they can be had at low cost, and as long as such ships will be available they will clutter up the market. In the meantime these planes are flown year in year out and are training a generation of airfaring people who think no more of flying from New York to St. Louis than of taking the Twentieth Century. These people are natural propagandists—few people talk so much "shop" as the aviators—and so the good word is spread from one family to another. The skeptics are still numerous, and yet it is very noticeable that today flying receives fewer "knocks" from the outsiders than it used to a few years ago. The safe and sane sort of flying, which is now far more in evidence than displays of foolhardiness, has had much to do to bring about this fortunate result. Some fliers, of course, are not amenable to reason, and it is chiefly for their benefit that we need and demand federal air legislation which would create the necessary government machinery for supervising civil flying and direct it into healthy channels.

N.A.A. Annual Banquet a Great Success

Important Speeches by Notable Aeronautical Personalities Are Feature of Great Reunion

The dinner given by the N.A.A. at the Hotel Statler, St. Louis, on Monday evening, Oct. 1, was representative of every branch of aeronautical activities. At the guest table were seated the leaders of American aviation, and our foreign guests at St. Louis. Senator Selden P. Spencer was toastmaster. In his introductory remarks he said:

Ladies and gentlemen, I presume the three greatest achievements in the last ten years of the world's history have been, first—not in the order of importance —, the wireless communication and control; in the chemical warfare development, and in the marvel of aviation.

Whether we look at aviation from the standpoint of what it has accomplished already, or from the immeasurable potential opportunities for the future, or from the standpoint of the thrilling and fascinating events which have characterized every step of its uninterrupted progress, we have a story that is intensely, vitally interesting.

Governor Arthur M. Hyde and Mayor Henry W. Kiel of St. Louis extended the greeting of Missouri and St. Louis to the visitors.

Not too Proud to Fight

The Hon. W. Frank Carter was introduced as a man whose life and activities, in a constantly increasing degree, have been for the betterment and uplift of St. Louis. Mr. Carter is President of the St. Louis Air Board and was the active organizer of the St. Louis races. He said:

I speak for a group of loyal St. Louisans, who, a few months ago, were charged with the duty of securing this International Air Meet in St. Louis; for them, I am glad to say that has been accomplished. I speak for a group of men who, in that short space intervening between seed time and harvest, had to prepare raw ground for this Meet; and I have the statement of the Army and Navy that they have done their work in a commendable way.

These gentlemen were not prompted by any selfish motives! It presented itself in three aspects—Patriotism, Commercialism and Sentimentalism:

Patriotism, because the next means of defense in warfare is going to be in the air, and any American citizen who thinks war will not occur is deceiving himself. God knows, I hope it will be a long time, but it will come just as sure as death, famine and pestilence come, and it will be fought in the air.

Commercialism, because we are seeking—as, no doubt, Admiral Moffett will tell you—to get into communication with not only the cities of our own country but foreign cities.

Sentimentalism, because we had one hundred and fifty St. Louis boys in that service, and there has been one St. Louis boy on that field, who was shot out of the air eight thousand feet and, fortunately, saved his life.

I know St. Louisans do not belong to that class of citizens who, when their hides are saved, forget that kind of young men. They are the flower of St. Louis.

If this meeting serves no other purpose than to teach those honorable gentlemen who represent us in the Congress of the United States that this country, like a proud individual, is not too proud to fight and we will take care of ourselves in our own proper way, it will have served its purpose well. (Applause)

H. E. Coffin's Address

The next speaker was Howard E. Coffin, President of the National Aeronautic Association. Part of his address follows.

If you think back over the ages, you will realize that civilization has never yet taken a backward step in the development or in the progress of any means of transportation; any new invention which has come along, which has given speed and luxury and ease of communication, has been sooner or later grasped and devoted to the needs of civilization.

We are undergoing exactly the same thing in connection with aviation. We have gone through it in the development, perhaps, in the earliest days of the ox-cart, we have gone along to the steam engine and the steam railroad to the electric line and to the motor car. Most of us in this room can remember when people were afraid to ride in a motor car, and were saying it was one of those new "contraptions" and inventions which would never have any place in the lives of people.

I remember the first endurance run in the history of motordom, away back in the dim ages, not so terribly long ago. There were twenty cars started from the Waldorf Hotel in New York, and the destination was Grant's Tomb, and only four finished. (Laughter) So you can imagine that some of us, who have come down through the development of this other transportation art, are not at all skeptical about the possibilities ahead of us.

We are going through, as in other transportation arts, certain stages. We have, first, the dreamer and the inventor—we have a man like Mr. Wright, who had a great dream, a great vision—, and they have done their work. Then we have had the engineer, who has made practical the dream of the inventor, and who has achieved the technical results which make possible the achievements of those who come after, in the line of business men who convert these things to the uses of present day needs. So now, we have arrived at a stage where the engineer has pretty nearly done his work.

W. Frank Carter, general chairman, St. Louis Air Board

Now, just what does all this mean—what does it mean to St. Louis? Just what does the arrival of the ZR1, tomorrow morning, mean to St. Louis? Do you realize that St. Louis will no longer be an inland town, that St. Louis is a new port on the ocean of the air; and certainly one of the most practical, if not the biggest air liners of the world will land here tomorrow morning, and can just as well as not depart from here, tomorrow noon, for London.

That is exactly what this thing means to St. Louis, it is exactly what it means to any other city in the United States, because we have, ladies and gentlemen, discovered merely a new ocean, and we are just now learning to navigate it in a most crude way. I think you will agree that is something worth thinking about.

We have had launched, recently, in this country, a compaign by one of the greatest patriotic organizations of this country, for the calling of a Conference for the Limitation of Air Armament. Let us examine that for a moment.

It is a very popular and a very ideal sort of thing, and the probable response of many of us here would be, "Fine, let us have this and let us limit this development of the air, as have been battleships and other things on which we have attempted to put a limitation."

But let us think of it in terms of America as compared to overseas nations: There, they have adopted a definite policy of the development of the navigation of the air, through the subsidizing of commercial aviation. That, ladies and gentlemen, is something we will never do

in this country. We do not believe in subsidies and, consequently, a development of America can come only through an appropriation through the channels of our Army and Navy Department, and the only real support that can be put under American aviation must come through these channels. Therefore, you see where limitation would put us.

In Europe, governmental funds are being devoted to the development of aviation by the subsidy of commercial aviation. If we accept limitation, we will practically kill American aviation. There is no use dodging the issue, it is one of the things we must think about.

Address by Dwight F. Davis

The address of Dwight F. Davis, Assistant Secretary of War, was memorable as it indicated such a complete understanding of the aviation problems of the United States. His remarks follow.

It is always a joy to come back to St. Louis, but it is, tonight, a great privilege to bring to this distinguished assembly the cordial greetings

Maj. Gen. Mason M. Patrick, Chief of Air Service, U. S. Army

and best wishes from the Secretary of War and from the President of the United States.

I want to assure the members of this Congress that the War Department is cordially sympathetic with their work. I think perhaps we realize more than any other group in the country the importance of the work you are doing. We feel that it is a distinct national service, and I can assure Mr. Coffin and the members of your Organization that the War Department will always give you its very cordial and close co-operation and assistance. (Applause)

I was particularly interested in what Mr. Coffin said about the development of transportation, because I think that sums up the keynote of our problem. Think of the fact of a speed developed at this wonderful air fete of almost 250 mi./hr. The effect of those developments has been to bring the world in closer relationship. As we know, the Atlantic Ocean has been crossed a number of times. Within a year, our Army aviators will fly from the Atlantic to the Pacific between dawn and dusk, and I believe, in a brief time, they will fly to China within the space of one hundred flying hours.

As I say, the effect has been to bring the world ever closer together, and if Macauley is right, "of all inventions, those that have shortened distance have done the most for humanity," that will be of tremendous benefit to mankind. But the future alone will show whether the airplane is a great factor in the progress of civilization, or whether it will be the most powerful instrument that man has ever devised for its destruction.

I want to speak to you particularly, tonight, about the development of the airplane and the aviation industry from the standpoint of national defense. In the past, we have always been in the habit of thinking, and quite properly, that our physical isolation from the rest of the world has been a great bulwark of safety, with the two great oceans on either side.

That was true in the days of the sailing ship, when it took six weeks or so for an invading force to reach our shores, but, today, the modern bombing plane can fly from Europe to these shores in about thirty hours, and the modern airship, like the ZR1, in say forty hours. See the difference that makes. An attacking force of very small size, a few thousand men, with an adequate accompaniment of bombing planes and airships, could reach our shores within forty hours, could hold our Atlantic seaboard at their mercy, strike a terrific blow at our whole industrial district, from Pittsburgh, East, striking at the very heart of the nation. That is physically possible unless we have an air force capable of meeting them and beating them down.

The 4000 lb. Bomb

I would not attempt to paint the horrors that such an invading air fleet could perpetrate on this country. Those of you who were abroad and saw the terrible damage done by the small bombs then in use, can have some faint conception of this, and we must remember that the two hundred pound bomb which was then used has been replaced by the two thousand pound bomb, and I think they are now developing the four thousand pound bomb.

Just recently, within the last two weeks, I saw a huge, powerful armored battleship literally reduced to a helpless ruin of tangled iron and steel by a single bomb dropped from the air. The damage to life and property which such a bomb would do if dropped upon a great city crowded with men, women and children, staggers the imagination. But we must remember that if there is another war—I hope to God there never will be—, the Army and the Navy may not be alone on the firing line, there may be no such thing as a non-combatant, and women and children, far from the battlelines, may have to suffer the full horrors of war. I leave to your imagination the desolation, the ruin, the anguish that such an invading air fleet could bring to this country within a very short space of time. I am speaking of what is physically possible under modern conditions, even though we do not think that is probable.

What are we doing to meet this menace? I mean "we" as a nation, not the War Department. Unfortunately, we are doing pitifully little, we are going backward. Congress has reduced our air force below the safety point of national defense. I think, today, we have only about nine hundred and fifteen officers and eighty-six hundred enlisted men in our air service, and we have failed to provide even that meager force with the proper equipment for training, much less for a war reserve or for combat needs.

I want to give you just a few figures, tonight, if you will permit me, because I think they are very significant. I suppose it is rather indiscreet, perhaps, to give them to you in this assemblage, but I think this is one of the times where indiscretion is the better part of discretion. I do not know whether that means anything, but it sounds like a pretty good epigram. (Laughter)

In 1922, due to the fact that we had a large number of planes on hand after the Armistice, we had a surplus of two thousand one hundred and twenty-five planes—when I speak of surplus, I mean for purely training purposes—; in 1923, that surplus was reduced to seven hundred and sixty-eight; in 1924, we have, today, an actual shortage of planes needed to train our aviators. In 1925, if our preparations are not increased, that shortage will be about six hundred and twenty-eight planes. In 1926, we will have a shortage of fourteen hundred and sixty-eight planes.

What we are doing is literally starving to death the most vital branch of our national defense. If Congress does not make adequate appropriations in the near future, our air service will be rendered absolutely impotent.

Commercial Aviation Starved to Death

Even a more serious situation than this—if there can be a more serious situation—is the fact that our commercial aviation industry is also being starved to death. One thing we learned in the World War, that it is absolutely impossible to build up a great industry, to meet a war emergency, over night. As a matter of fact, during the war, although all the energies of the country were bent toward production, the first American plane did not reach the French front until August, 1918, sixteen months after the declaration of war. That is no criticism upon the people who were handling that problem, because they had a very serious problem to deal with.

We are in a little better situation, today, but to meet the program of the War Department, in the case of an emergency, it would take the following time to manufacture the planes:

Training planes, eleven months.
Observation planes, nine months.
Attack planes, seventeen months.
Bombing planes, seventeen months.
Pursuit planes, eighteen months.

When you take those figures in connection with the length of time it would take an attacking force to reach these shores, when you consider the immeasurable damage that could be done to this country within forty hours after war was declared, I think you will realize we are faced with a serious situation.

One of the lessons of the World War was the fact that aircraft is absolutely indispensable in modern warfare, and the nation which is not provided with adequate air forces is almost certainly doomed to defeat.

What should we do under these circumstances? Personally, I do not believe in building up a great air fleet. Certainly not to enter into competition with other nations along that line. But I do feel that it is important that we develop some sort of a program, say a ten year building program, not for the purposes of aggression, not in competition with other nations, but to give us some basis on which to work, and to give our airplane manufacturers some basis on which to figure they can stay in business.

What We Should Do

It need not be a large amount of money, we do not want a great number of planes, but I think we should give our air forces at least a chance to protect us; and we should give our aviation industry a chance to exist. Other nations are alive to this problem. Great Britain, for example, has an air force of thirty-one thousand officers and men, thoroughly equipped and trained, where we have nine hundred and fifteen officers and eighty-six hundred men. Their budget, last year, was somethink like twelve million pounds, where our Army budget was twelve million dollars.

France has made her airplanes her first line of defense. She has some fourteen hundred airplanes in commission and something like that in reserve. Her air budget was two hundred and forty-seven million francs. Italy is building up her fleet, and all the nations of the world are realizing this serious problem which confronts the world, all except America. America must wake up to this serious problem which is confronting her.

We have a wonderful air force, both in the Army and the Navy, splendid young men, red blooded, keen, brave and very wisely led by older heads, such as General Patrick and Admiral Moffett, but the country itself must back them up if it expects them to save the country in time of need.

The last speaker was perfectly correct that we must rely upon the airplane as a vital part of our national defense. We are not in any sense a militaristic nation, we have never been, we never will be, it is contrary to all our thoughts, all our desires. We hate, loathe and fear war, but merely repeating, parrot-like that "we hate, loathe and fear war," unfortunately, does not mean that war will be impossible. Mars is not a follower of Dr. Coue. (Laughter)

We should always, in my opinion, be eager and anxious to make war unlikely, but we must not forget the lessons of the last war. The nation which sends its boys into battle, as we did in the last war, untrained, unequipped, is guilty of nothing short of murder. (Applause)

The one thought I want to leave with you, tonight—I hope I have not kept you too long—, is this: We must see to it—we, particularly, the men who were in the service during the last war—that American boys are never again sacrificed unnecessarily, as many of our comrades were sacrificed in the last war, because in times of peace we did not have the intelligence to prepare for possible war. (Applause)

Ox Team vs. Airplane

Introducing General Patrick, Senator Spencer told an interesting incident in connection with the transcontinental flight.

When Lieutenant Macready and Lieutenant Kelly—whom we hoped to have here tonight, and who I understand are to be at the contests—made their great flight, after a plucky third attempt, leaving Mitchel field in the morning and reaching San Diego in twenty-six hours and a little more, one of the first messages of congratulations which they received was from an old man named Ezra Meeker, who lived in the City of New York, and who was ninety-three years old, and his message read something like this:

"Congratulations on your wonderful trip. I made the same trip seventy-one years ago, with an ox team, and you beat my record four months, twenty-nine days, fifty hours and thirty-eight and two fifths seconds. I am ready, the next time you make the trip, to go with you." (Applause)

It is not beyond the limits of an easy vision to see a day from dawn to dusk, a morning upon the Atlantic and an evening upon the Pacific.

General Patrick's Address

General Patrick then delivered the following address:

This Association which meets here has a wondrous motto—"America First In The Air." But it makes those of them and those of us, who have been trying to achieve that ambition, think just a little bit, and remember that once America was first in the air, when two of her gifted sons taught the world that men could fly. But since that day, only a few years ago, we have been lagging behind more and more, and other peoples and other nations have taken greater advantage of this new method of transportation. It makes us pause and wonder why.

Now, we do have every airplane record, every aircraft record, except one, and we are going to bring that back just as soon as I get ready to send a man after it. (Applause) This is not enough. It means that we have designers of aircraft and of engines, we have builders of both, who can produce machines the equal of those that any other nation knows, and yet, although we have pilots who can fly them, men who do and men who dare, pilots whom we can pit against any of any nationality and know they will make good, in spite of all these things, the air service is neglected, and, in this broad country of ours, there is practically no commercial use made of aircraft.

Of course, that should appeal to us just a little bit, a bit to our pride and, if you will, to our more tender point—our pocketbook. As the circular has pointed out, the World War showed that a country without an adequate air force is doomed to defeat, and it is going to be a pretty heavy price that any country has to pay for unpreparedness. If we continue as we are and make no use of aircraft, we are going to be left behind, sadly behind in the race for commercial equality in the markets of the world.

We, today, are sending out our air squadrons from place to place, and are building planes to supply them by air. We can do anything. We can carry men, we can carry munitions, we can carry supplies. The circular underestimates the size of the bombs that we are prepared to drop, in case of war. The Barling Bomber which I expect to have here on Wednesday can take up a bomb weighing five tons, or ten thousand pounds, practically half of that weight explosive, and it would wipe out the city of St. Louis in a single one drop upon it. That is what we have to face—face coming from abroad—and we have to know that unless we can meet an air force that comes against us, we ourselves may be practically vanquished, made to pay tribute, a defeated nation.

Rear Admiral W. A. Moffett, Chief of the Bureau of Aeronautics, Navy Department

We Need Air Legislation

Now, we need legislation; we need legislation to control flying. We need a larger air force, we need one better equipped. As the Secretary has said, I face just this situation in the Army Air Service, that two and a half years from now, with the money I have in sight, I will have less than three hundred serviceable planes, just one-fifth of what I need for the small air forces we are allowed to maintain.

A single nation (of which we know), in forty hours, can put on our shores three and a half times as many planes as we have in the entire Army. That is what we are facing from a standpoint of national defense.

Now, this Association can do much, it can educate these people of ours, teach them the importance of the development of aircraft, insist upon legislation, provide for an adequate air force, provide for or insist upon government aid, which must be extended and which has been extended

to every form of transportation this country knows. But to do that, it has to be national, in scope as well as in name, and remember that the mere passing of resolutions is not enough; it takes hard work and individual effort.

I think, on behalf of the Army Air Service, I want to pay just a little tribute to the man who is responsible, the man who has led this Association through the most critical year of its career. Howard Coffin has done much, he has spent money, he has been a man of broad vision, he has been liberal and he has been patriotic, and it is for you to say whether what he has done shall be done in vain. (Applause)

Admiral Moffett's Address

Admiral Moffett was then introduced by the Speaker, and addressed the dinner as follows:

Mr Denby was very anxious to come to this Meet, and he told me to say, if I had an opportunity, that he took great personal interest in it, and he would have come if it had been possible for him to do so and break an engagement he had already made. Mr. Denby has always taken a great interest in aviation, he was able to go to the Meet last year, and he was sorry he could not come at this time.

I would like to tell more about the ZR1 than to talk on any other subject. I do not know that I can add anything to the distinguished speakers who have preceded me. As far as the Navy's situation, I would like to add to what General Patrick has said about the Army, the Navy

Col. Paul Henderson, Second Assistant Postmaster General in charge of Air Mail Service

is in the same situation but it is twice as badly off, because we have only half what the Army has. (Laughter) That is where we stand. We need help just as much as they do, and we feel the same way toward industry that General Patrick has so well expressed.

In regard to what Mr. Coffin said about the limitation which the American Legion has urged: I speak as a member of the Legion, that I do not know how they get started on that track, except this idea of economy and because they limited battleships, they thought it would be well to start in on aircraft.

Aircraft Limitation Impractical

That subject was very carefully considered at the Limitation of Arms Conference at Washington. It was referred to a sub-committee, on which I had the honor to serve, General Patrick also was a member, and it was brought up in the agenda. Our government took the stand that the aviation of the Navy could not be limited. The question of Army aviation was considered by experts, and they came to the conclusion that it was totally impractical to do it, and it was undesirable to do it, because you were limiting transportation and communication that civilization was depending upon; that we had a wonderful opportunity to develop aviation for the benefit of civilization, and it would be a great mistake to do it. We thought it would be as reasonable to try to limit automobiles, because automobiles are used for war.

We also came to the conclusion it would be impractical, because it could not be carried out, no one would know what planes other nations had, and there would be no way of checking up. Even the proposed lighter-than-air limitation could not be done.

Instead of talking about aviation, I would like to tell you about this Dirigible ZR1. It has been referred to as a Zeppelin, probably the "Z" gave that impression. "Z" is just a letter adopted in the Navy to indicate lighter-than-air.

Why the Navy Built the ZR1

The manufacture of dirigible airships was started in this country during the war, and was taken up by the Joint Board of the Army and Navy, and they adopted a plan to get four of these ships, two to be built in this country and two to be built abroad. That was later modified to specify one to be built in this country and one abroad.

The Joint Board, when they considered who should do this, after some discussion decided that, perhaps, the naval constructors, who are skilled in building and designing ships in the Navy, would be the ones who might undertake it. Admiral Davis said he would undertake to build this ship, and he, with Commander Hunsaker designed the airship. The ship is not a copy of anything we had previously acquired, it is simply the developed information we could get from captured ships as well as our own ideas, and it is as much a design of an American ship as any other ship. The ship was designed in this country and constructed entirely of American material.

The ship is made of duralumin, which is an American product developed by a company in Pittsburgh. The engine was built in Detroit. The fabric was built in Dayton, Ohio. The ship was fabricated at the Naval Aircraft Factory in Philadelphia, and is now having its first trial, as you know.

When this program of building one ship came up and was settled, the acquirement of one abroad was taken up, and we entered into a contract with Great Britain for that ship. The ship was named ZR2. She was, unfortunately, lost, and the lighter-than-air received a very severe blow.

There was a great deal of opposition to finishing these ships, and the fact was that the money was practically stricken out of the appropriation for financing the ZR1, at the time the ZR2 was lost. We did not see why we should quit our program, for merely because Germany lost a ship and Britain lost several ships, they did not quit, and we did not see why America should quit. We took that stand and carried out our program.

The Why of the ZR3

It was largely for that reason the question of getting an airship from Germany came up. We wanted to get that ship as part of our program, because we had lost the ZR2, but our program has been carried on and we have constructed one and we expect to acquire one later this year or early in the Spring, if the trouble in Germany is settled. About the ZR3, which we call her, we have recently heard she may be delayed owing to the industrial condition of Germany.

Say if you had a hangar in the East, you would not need one anywhere else in the country. You could send them across the ocean and have them go to Morey Mast and be refueled. That is a thing that made them practical.

We were not so sure as to the military or naval use. There may be some question about that, but I do not think there is any question about it. They undoubtedly had their use, but we wanted to find out definitely if what we claimed for them is true.

We had spent five million dollars on the production of the ship and as much money more at Lakehurst, in building the hangar, so it was worth while to finish it and find out. That is what we are trying to do now, to find out if these ships are practical.

Primary Object Commerce

Our primary object was commerce, that is, to find out for commercial reasons why we could not show a new means of transportation. That has been the primary object. We have attempted to keep data on what they cost, and we intend to operate them and construct them, if necessary.

I was asked by an officer how long I thought the ZR1 would last. I told him I thought if she had a good commander, a competent crew and no unnecessary risks were taken, she would last until she was worn out. (Laughter) I believe that.

With a sailing ship, the man is dependent upon the weather, and the ship could only move twelve or fifteen knots, and these ships can go 60 mi./hr. They have radios so they can keep fully informed as to the weather.

The average storm on the Atlantic moves about 12 mi./hr., they do not go over 25 or 30 at most, so if these ships want to avoid a storm, there is no question they can get the information and get out of the way safely.

We are doing our best to be careful and have safety first. We do not like to have "safety first" used too much, but in this case we are using it. We feel we have taken a chance in bringing this ship here. This is a part of her trial, she is not in commission yet and it will be sometime before she is put in commission, but we do feel, in the development of these ships, that America has a great opportunity. If we go at it carefully and thoroughly and handle these ships with trained and skilled men and pilots, the Navy feels they will be able to show that they have developed and brought to America a new means of transportation.

Col. Henderson's Address

Paul Henderson, Second Assistant Postmaster General, told about the Air Mail achievements. His address follows.

As compared to the romantic services of General Patrick and Admiral Moffett, the Aviation Service in the Post Office Department is rather drab. We are sort of an ox-cart in the aviation business.

It was just about ninety years ago, when there began to show up in America, here and there, a few very short and very poor railroads. Before those short railroads were built it had been the habit of the Post Office Department to carry mail from town to town in one or two ways. They let contracts to individuals with instructions that they must either deliver the mail on horseback, or, as the old contracts read, with "shays."

It so happened that one man had a contract to carry mail over a route which was covered by one of these railroads. His contract demanded that he carry the mail on horseback. He saw the trains going back and forth on this railroad with a semblance of regularity and he thought it would be a good idea to carry it on the train, so he did. He rode on the train with the mail. He did this several times. One day the train broke down and just as quickly as possible, he got a letter from the then Postmaster General, which dwelt at length on the fact that railroads never could be practical; that its failure to deliver mail on time was due solely to the fact that he abandoned his horse, for this very impractical thing called a railroad, and that he had better jolly-well and get back on horseback. (Laughter)

In contrast to that, I think the vision of the two Postmaster Generals, under whom I have been privileged to serve, is wonderful. Each one of these has been very definite in his instructions to get the most possible out of the airplane.

What the Air Mail Accomplished

Briefly speaking, during the time that the Air Mail Service has been established, since 1918, we have accomplished this: We have learned to operate our airplanes with rather a remarkable degree of efficiency in the day time. For some thirty odd months, we obtained 96 per cent efficiency on the Transcontinental flight from New York to San Francisco. About a year ago, or more, we undertook a study of what it might require for us to operate our airplanes at night with the net results that four days in August, we operated day and night from San Francisco to New York and from New York to San Francisco. We managed to make the east-bound trip one day in twenty-six hours and fourteen minutes. Our west-bound trip averaged around twenty-nine hours. We discovered that it is entirely possible to operate airplanes at night, and I think is the significant conclusion to be drawn from our experiment.

It is our intention to re-open the Transcontinental day and night service, within a short time, probably next Spring. I believe that we can establish the schedule of twenty-seven hours east-bound, and I think for the sake of safety, thirty hours, west-bound, the difference being the prevailing winds.

People in St. Louis have asked me when and how St. Louis might get air mail. My answer to that would be, "St. Louis can have air mail whenever she wants it, as can the rest of the United States. The Post Office Department now knows that it is physically possible to give you air mail service. We could, for instance, give you over-night service to New York, Boston, Philadelphia, Jacksonville, Fla., Fort Worth, Denver, Minneapolis, and dozens of other places that I have in mind. The question as to when St. Louis will get that service is absolutely up to the people of St. Louis. You can get it when you can convince our good friend Spencer and all your other friends in the House of Representatives that you should have it, and I want to say to you that when Congress tells us to give it to you, we will be delighted to do the job. I do not think that any one should presume to predict what the future of the Air Mail Service may be. I think this is entirely within the decade that all important business centers of the United States that are no less than five hundred miles apart and not more than fourteen or fifteen hundred miles apart, will be connected by lighted air ways over which we will be flying your mail at night.

There are just two wholly unknown factors in the transportation of mail by air. One is the detailed question of cost. The other is the absolutely unknown fact of how much we can get out of it. We have not the least idea of the number of people, in St. Louis, who will pay eight cents to ten cents to have a letter go to New York overnight. The only way to find it is to try it out.

Gasoline Explosion at Bureau of Standards

An explosion of gasoline vapor in one of the altitude chambers at the Bureau of Standards on the afternoon of Sept. 20 resulted in the death of four men and the injury of six others. The heavy doors of the chamber were blown off, and nearly all the windows of the dynamometer laboratory in which the chamber was located were blown out, steel sash and all. The brick wall of the building was cracked opposite the door of the altitude chamber, and most of the testing apparatus in the room was damaged. The cork lining of the chamber took fire and some tanks of gasoline and lubricating oil which it contained were also ignited. This fire was put out by employees of the Bureau who soon arrived on the scene of the explosion.

The dead are Logan L. Lauer, Urban J. Cook, Stephen M. Lee, and James E. Kendig. The injured are Herbert K. Cummings, Frank E. Richardson, Roger Birdsell, Clarence W. Elliot, C. M. Smith, and R. F. Kohr. All of the latter are expected to recover. Lauer was directly in front of the door of the chamber when the explosion occurred. He was caught between it and the brick wall and instantly killed. The other three lived for some hours after the accident. Mr. Smith, a man of about sixty, was blown out of the door of the building and onto a pile of scrap lumber. His leg was badly bruised, his head cut, and his glasses smashed. Injured though he was, he crawled back into the building, which was now burning furiously, and turned off the ammonia from the wrecked altitude chamber. Then he went down in the basement of the building and pumped the ammonia out of the coils before being taken to the hospital.

The altitude chamber, in which the explosion occurred, is a small concrete room, the walls and doors of which are designed to stand an external working pressure of about 1500 lb. per square foot and is used for testing motors under conditions of low air pressure and temperature encountered at high altitudes. At the time of the explosion, it was being used for a "winter" test on an automobile engine in connection with a series of tests now being conducted at the Bureau to compare the efficiency of utilization by automobile engines of gasoline of various degrees of volatility. The chamber was closed up tight with no one in it, and the temperature had been lowered to about zero at the time the explosion occurred.

It is thought that a leakage of the feed pipes or the flooding of the carburetor may have been responsible for the escape of the gasoline which caused the explosion. The mixture is supposed to have been ignited by a backfire through the carburetor. One of the survivors remembers hearing the engine backfire just before the explosion occurred. An examination of the gasoline consumption records, made just before the explosion, shows that not more than a quart of gasoline could have escaped into the chamber, but this small amount is considered sufficient to have caused the explosion.

Relief Fund for Families

A permanent relief fund for the families of the employees of the Bureau of Standards who were injured or killed in this explosion has been started by a check for $1,000 from the Secretary of Commerce. The American Petroleum Institute which, with other organizations, was cooperating in the experimental work being done by these men at the time of the accident, has given a check for $10,000 for permanent relief and the other cooperating organizations are taking steps to give financial aid for the dependents of these men. Bureau members have given about $1,300, and other gifts are being received.

Messages of sympathy and regret for this serious accident, as well as many expressions of appreciation of the work and self-sacrifice of those engaged in this research, have been received by the Bureau by telephone, telegraph and mail.

The danger of this work, performed for the advancement of science and the improvement and fuller application of the automotive equipment in use today, and the self-sacrifice of the men engaged on it, are brought to the attention of the public through this catastrophe. The records of work done by these men will be taken up by others and play their part in improved and safer means of automotive travel on land, sea, and air.

Numerous individuals and organizations have expressed a desire to share in the relief of those financially affected by this accident. The Secretary of Commerce has, therefore, constituted a committee, the Accident Relief Committee of the Department of Commerce, empowered to receive and disburse funds contributed to this cause. Anyone desiring to give any amount toward this fund may send their contribution to E. W. Libbey, Secretary, Accident Relief Committee, Department of Commerce.

The N.A.A. Annual Convention

New Officers Elected, Budget for Coming Year Approved and Committee Reports Received

The Second Annual Convention of the National Aeronautic Association was held in St. Louis on Oct. 2. An organization meeting was held at the Hotel Statler in the morning, committee meetings during the afternoon and the final session of the convention in the evening, after the annual dinner.

B. H. MULVIHILL'S ADDRESS

The first session was called to order with Howard Coffin, President, in the Chair. He called on the Vice-President, Bernard H. Mulvihill, to read the report of the year's work of the Association. The report, in brief, follows:

That there is need for a national body such as the National Aeronautic Association is unquestioned.

Other nations, recognizing the tremendous importance of being supreme in the air, have entered into a mad race for aerial supremacy. So much so, in fact, that there is already talk of an International Aerial Disarmament conference; and while I think it is generally felt in this country that a conference of this kind would be ill-advised, the American Legion states that "if after exhausting its best efforts, the United States fails to end the air race now in progress among the European nations, it is up to this country to enter this contest in earnest, and that we must build a fighting force that will be able to defend our skies, come what may. That if we don't we invite disaster."

There is hardly need of my pointing out the remarkable progress that has been made in this country during the last year in the various phases of aviation, and all of you understand fully as well as I the vast possibilities of commercial aviation—the dozens of uses to which it can be adapted, aside from the potential possibilities of utilizing commercial aeronautics as a means of national defense in case of emergency.

IMPORTANCE OF AERONAUTICAL EDUCATION

All the other important nations in the world, recognizing the need of public education toward aeronautics, have taken steps to form national bodies similar to the N.A.A. for the purpose of disseminating proper information, and in some cases the governments have gone so far as to subsidize them. The importance of proper education may be realized from the literature of the British Air League, which body was organized on the same principles as the N.A.A. In a recent bulletin of this League, Lord Birkenhead is quoted as follows:

"There never was a moment in which the security of this country so imperatively demanded that there should be some association of citizens zealously pressing upon the attention of the nation the terms, and the only terms, upon which, in the air, the security of the country can be safeguarded."

Their slogan is "Air Supremacy—Our Security, make Great Britain supreme in the air!"

This movement in Great Britain is typical of similar movements throughout the world and it certainly behooves this nation, which undoubtedly can benefit more greatly than any other through aeronautic development, to begin to assist this infant industry toward a natural development so that we may realize as quickly as possible the advantages to be derived

The National Aeronautic Association in the short time it has been in existence, has done much to promote the science of aeronautics, and has assisted greatly in a year of development which probably has been as important as any since the first heavier-than-air flight by man.

DIFFICULTIES OF THE N.A.A.

It has not been a smooth road which the N.A.A. has had to travel, nor was its creation welcomed in the manner which the assembly in Detroit last year was led to believe. The attitude of most people now interested in aeronautics has been one of "let George do it," and that until such a time as the Association was an accepted success, they didn't care to become too closely allied with it for fear of being accused of having something to do with a dud. Criticisms, knocks and indifference have never been known to assist in building up anything, and the same thing can be said of the "well wishers" who tell how much they like things and then consider their duty done.

It was to be accepted that the first year of the new Association would be fraught with many difficulties—particularly in view of the trouble that had arisen in the affairs of the old Aero Club of America and the American Flying Club.

I remember stating last year on the floor of the Convention that we had assembled for the purpose of cleaning up a mess which aviation had gotten into, and that the general public had the idea that practically every interest in aeronautics was made up of cut-throats. I also stated that it would be necessary to create a confidence among one another, in order to present a united front before attempting to regain the public confidence.

Howard E. Coffin at that time stated that everyone would be watching us closely, and that in his opinion a failure on the part of the N.A.A. in assuming the leadership in aeronautics would be disastrous to the industry and the science as a whole. The truth of these statements cannot be gainsaid, and the greater part of the work of the Association this past year has been overcoming prejudices and attempting to gain the confidence and support of the general public.

Mistakes have no doubt been made during the last year; criticism in some respects justified; but a careful review of the work of the Association during its first year from an unbiased viewpoint will show that it has done in one short year more, perhaps, than all the combined efforts of similar organizations during the last twenty years. Membership support has been in many respects disappointing, although I might state in passing that today, with its two thousand odd members, the N.A.A. is the largest aeronautic body of its kind in the world, and is growing larger every day.

THE AERONAUTIC BODY OF U.S.A.

There is absolutely no doubt or any question that the N.A.A. is now recognized as THE aeronautic body of the United States, and that it has assumed a position of leadership which can not now be disputed. As the American representative of the International Federation, the N.A.A. has in one year achieved a position of more importance abroad than during all the years the F.A.I. was represented in this country; and we have reached the stage where serious consideration and favorable action are the rule rather than the exception in F.A.I. councils, when proposals are submitted by us. In proof of this, I might mention the fact that all of the American proposals made to the F.A.I. during the last year have been adopted.

During the last year the work of the Association has been varied. The importance of its work can be judged better, perhaps, after a short summary—its main activities being directed to:

Legislation; Publicity; Membership; Control of Contests; Junior Activities; Propaganda for the support of Government Air Policies.

MR. COFFIN'S POLICY

The Association has done more work perhaps than was justified by the membership support, and we have been criticized in some quarters on charges of unjustifiable expenditures. In answer to this criticism, I first want to say a few words about a man whom I consider one of the greatest patriots in the country today and one who has, in my estimation, done more than any other individual in the country for aeronautics—namely, your President, Howard E. Coffin.

Mr. Coffin realized last year at the formation of this Association that its first year would be a hectic one, and that the obstacles to be overcome in placing the Association on a firm footing would be many, but even in view of those facts was persuaded to accept the leadership for the first year. He has unselfishly entered into the work at a very great personal sacrifice; and although some members of the Association may not be satisfied with the results, the answer to their criticisms might be stated in the question "what have they done!"

After the convention last year in discussing the future policies, Mr. Coffin, realizing that membership support could not be expected immediately and that there was a vast amount of work to be done which if left neglected, would be detrimental to aviation, came to a decision that the work must be done even though membership support were not forthcoming, and if the work had to be carried on at his own personal expense.

Accordingly, Headquarters were established at Washington, and various phases of the work entered into.

CONTEST COMMITTEE

The Contest Committee was established under the Chairmanship of Colonel Frank P. Lahm, with B. Russel Shaw as Vice Chairman and Carl P. Schory as Secretary.

Its first task was the revision of the old Contest Committee files of the Aero Club of America and bringing these records up to date.

Some of the activities of this Committee were as follows:

Compiling a list of all official world's records; homolgation of American records; participation in the Air Meet at New Haven, Conn., in the fall of 1922; established official timers and observers in many cities of the United States and at practically all of the airdromes; conducted the speed trials, duration and altitude tests which resulted in the United States holding all of these world records; arranged for, drew up the program and assisted in the promotion of the International Races now being held at St. Louis; assisted in the promotion and conduct of the National Balloon

Race at Indianapolis; arranged for the N.A.A. entries in the International Balloon Race at Brussels; conducted negotiations for the Curtiss Marine Trophy Race to be held early in 1924; entered three Navy seaplanes in the International Schneider Cup Race held last month in England; conducted nation-wide inquiries looking for favorable glider sites; drew up rules and regulations for the first National Glider Meet at Berkeley, Calif.; petitioned the F.A.I., at its annual meeting at Gothenburg, to change the F.A.I. rules in regard to method of figuring speed trials, recognition of non-stop cross-country flights, establishment of additional testing stations for stop watches, and permitting re-fueling flights in the air for various records issued pilots certificates and annual licenses to 280 pilots, and participated and assisted in meets held at Pine Valley, N. J., Baltimore, Md., Old Orchard, Me., Boston, Mass., Okmulgee, Okla., and others. This Committee also participated in and was represented by proper delegates at the International Conference at London, at the annual meeting of the F.A.I. at Copenhagen, and participated in the deliberations of the Safety Code Committee in Washington.

The importance of the work of this Committee is not realized, perhaps, by the members of the Association. At various times I have been asked why the work of this Committee could not be carried on by volunteer work. I think after you hear the Contest Committee report by its Chairman, Colonel Lahm, you will decide that it would be impossible to conduct this work by any haphazard method, and I think you will be convinced that the cost of it is necessary. I do believe, however, that the Contest Committee can be made more or less self-supporting, as greater interest is being aroused in race meets every day and an association can hardly be expected to be called upon to conduct them at its own expense.

FOREIGN RELATIONS COMMITTEE

The Association has been very ably represented abroad by the Foreign Relations Committee under the Chairmanship of F. S. Lahm.

This Committee has been very instrumental in having American records homologated by the F.A.I., and represented the Association at the International Conference at London and the Conference at Gothenburg. That their work was well planned and ably taken care of is evinced by universal recognition of the Association abroad.

LEGISLATIVE WORK

The Association participated in conferences on the Winslow Bill during the last session of Congress and assisted materially in efforts to have that measure passed. It is actively engaged in the preliminary work necessary in obtaining the passage of Federal aeronautical legislation by the next Congress; and although the work that this Committee has been able to do this last year has been greatly handicapped by the fact that the Winslow Bill was not introduced in the last Congress in time to have it considered, I believe that this Committee will be able to accomplish valuable work during the next session. The Committee has been under the Chairmanship of William P. MacCracken, Jr., of Chicago.

PUBLICITY WORK

A Publicity Department was established at the beginning of the N.A.A. for the purpose of creating a national interest in the Association, and to attempt to furnish the leading newspapers and publications throughout the country with the proper kind of publicity in order to show that there is more widespread interest in the important developments of aviation than in scare-head notices of accidents.

This Committee obtained valuable contributions on aeronautics for magazines, and gave out a very large number of news releases to a newspaper mailing list of over 1500. It obtained articles from many of the most prominent business men of the country and assisted from time to time in the preparation of special magazines gotten out by the aeronautical publishers. It prepared pamphlets and bulletins, and disseminated information of value to members of Congress, State Legislature and performed various other services. The plan has been accepted by the National Council of Boy Scouts and will be inaugurated during the coming winter.

Since the adoption of the Chapter means of local representation, this junior activity idea has been further broadened to the point where a Junior Flying League of the N.A.A. has been established with the idea of educating youths other than Boy Scouts through the Junior Activity Committees of the various Chapters. The plan of the Junior Flying League calls for the establishment of aviation classes open to any youth of a community interested, and it is hoped that through the assistance of former Air Service officers, this educational feature will be one of great value not only to the youth of the nation, but to the former flyers as well.

To keep this youthful interest alive, the Contest Committee has assisted in the promotion of model races throughout the country, and it is hoped that a revival of this sport will go far in creating a future membership for the Association.

ORGANIZATION WORK

The greatest and most pressing need of this Association is memberships, and it is the duty of every member—first, last and all the time, to be on the lookout for new members and to assist in this work.

Various means and methods have been tried out in attempting to build up the membership of the Association, and it has just been recently that real results have been forthcoming.

During the meeting at Detroit last year, membership expectations were very encouraging, and one was led to believe that by putting up a sign "N.A.A." the world would flock to its doors. That this was not the case was seen by the fact that of the 432 delegates who attended the Convention at Detroit, only 131 took out membership. Of the 500 members of the Advance Committee on Organization of the N.A.A., only 45 took out membership until Jan. 1, 1923.

Various methods of obtaining members were tried out and a great amount of effort devoted to this work—appeals being sent to former Air Service officers, members of Flying Clubs, and carefully prepared lists of people known to be interested in aviation; but the outlook in January of this year was so discouraging that it was decided that some radical method of obtaining membership must be adopted. Accordingly, a membership drive by some experienced membership organization was decided upon. A large and costly staff was built up at the instance of the firm selected, and the National Membership Campaign inaugurated.

This work was undertaken at the personal expense of Mr. Coffin with the understanding that if successful, he would be reimbursed for it.

After several months of effort and an enormous expense it was found that membership in the Association could not be sold from the street corners, nor did the Association receive the expected assistance from the members or people interested in aeronautics to justify continuance of the campaign; and accordingly the temporary staff which had been built up for this purpose was discontinued as of June 1.

This campaign was decided upon after great deliberation by the Executive officers and as a final attempt to bring the membership to a point where it could support the activities of the Association; and though the campaign, as such, was not successful, the benefits of the work done in the various Districts is just beginning to materialize, as we learned of some of the obstacles that must be overcome before the expected membership would be realized, and have taken steps to surmount them.

Up until the time of the Campaign, it was hoped that it would be possible to derive such income from the membership as to justify the expense undertaken by the Association; and accordingly, this not being possible, the expenses of the Association were cut to the minimum consistent with the work necessary.

One of the difficulties in organization work was the fact that no adequate local representation had been worked out, the Corps Area plan of organizing being too broad to permit of active work on the part of those interested.

It did not arouse State pride, and led to jealously on the part of some localities due to their not having proper representation; and in most Districts, the area covered was so great that the District officers could not canvass it.

The Board of Governors have recently adopted the plan of State rather than District government, and the Chapter plan of local representation.

This has already resulted in the establishment of six fully formed Chapters and over thirty others in process of formation.

We have noted with satisfaction the interest being taken in the various State bodies, and since the Chapter plan allows of the recognition of existing Flying Clubs this has materially assisted in creating a new interest in the Association.

MEMBERSHIP

The membership of the Association to date is divided about as follows, and it is interesting to note that during the last three months the membership has increased approximately fifty per cent:

First District	153	members
Second "	202	"
Third "	241	"
Fourth "	227	"
Fifth "	223	"
Sixth "	197	"
Seventh "	419	"
Eighth "	103	"
Ninth "	147	"
Foreign	14	
TOTAL	1926	"

FINANCE

Financial expenditures during the last year have been quite heavy, as was to be expected, and at times the value of the expenditures was questioned, in view of the delay in realizing results.

The Finance Committee at the Detroit Convention last year, in its recommendation as to probable expenditures, recommended a budget of approximately $5,000 per month; and the expenditures actually incurred, aside from the membership campaign, come very close to being within this estimated budget.

The Association has expended $116,062.49—approximately $50,000 of which was expended on the national membership campaign. Of the remaining $66,000 considerable sums have been disbursed for extraordinary expenses and for organization expenses necessary to the establishment of a new national association.

In figuring the budget for the Association the first year, the Convention Finance Committee could not forsee a lot of organization expenses which were absolutely necessary, such as office furniture and supplies, typewriters, adding machines, mimeographs, addressing machines, and other items. Incidentally, an item not considered by the Finance Committee was

one of travelling expenses, which have necessarily been considerable during the formative period of the Association.

Another item which was not taken into consideration was that of carrying on a Contest Committee, whose work has been one of the most important undertaken during the year. To Aug. 31, the Contest Committee has cost the Association $11,000.

A publicity program such as was carried out, and which included releasing over 220 bulletins and releases to a mailing list of over 1,500 newspapers, besides the compiling of educational pamphlets, descriptive folders, N.A.A. literature, etc., was undertaken at a cost which in no possible way could have been foreseen at the time of the formation of the Association.

The Publicity Department, exclusive of the membership campaign expended $15,000 approximately.

This entire expense—viz., $116,062.49, has been entirely borne by Mr. Coffin; and it is his plan that on the fiscal year ending Oct. 15, 1923, the Association will be turned over to the incoming Board of Governors absolutely free of debt.

With reference to some criticisms that may be directed toward the present administration concerning expenditures, I am sure that these are all based on misunderstandings, and without proper knowledge of the reasons for the expenditures or of the results obtained. A detailed financial statement has been prepared and will be submitted to the proper committee, and anyone interested in it and wishing to examine same may do so.

OTHER ACTIVITIES

Other activities of the Association have been many, and passing rapidly over some of them are the "Free Flying Scholarship contest," details of which have been announced in the Bulletin; the nation-wide insurance inquiry; assisting various local organizations at different times in obtaining Government hangars and Government airplanes for exhibition purposes; defending itself against attacks such as the Martin Aircraft Suit; publication of an official bulletin such as has been sent you the last three months; furnishing speakers at various meetings at various places; answering inquiries of all descriptions, and a hundred and one other activities—all of which require time, work and money.

SUMMARY

The N.A.A. has, in one short year, become the leading aeronautic organization in the United States, and is universally recognized as such. It has, by its broad, unselfish appeal, interested prominent citizens all over the country—people who had heretofore never been identified with aeronautics, and has set them to work creating and building up local interest in commercial aeronautic development.

It has generally aroused public sentiment to the point where people are talking and thinking aeronautics; and the general tone of aeronautic thought today is not what has been done, but what are the needs of the future.

Proper legislation is a basic necessity for the development of commercial aeronautics, and to the N.A.A. goes a great deal of credit for the consideration which has been given this subject, and which will lead, no doubt, to the passage of favorable legislation during the next Congress.

The National Association has brought new blood into the game; it has aroused an appeal to the youth of the nation and has gained the confidence of the public as a stable organization, and one whose need is unquestioned.

There must be a civilian agency to coordinate individual aeronautical interest into a composite sentiment, and to direct that concensus of opinion toward Congress, or whatever other agency will control the various phases of aeronautic development.

To say that the Association has not done good work, or that it has not made great progress, is folly—just as would be folly to say that this work will not be carried on, or that there is no need for an Association. To those who have nothing but criticism to make, I would suggest that instead of criticizing and trying to tear down, they get into the fold of workers and help build it up.

The National Aeronautic Association is too important and too large to be carried on by any one person or group of persons. Its ever-increasing importance cannot be delayed through the petty grievances of any individual or group.

In closing this report, I want to say that the officers of the Association have no excuses to make. The Association has had great obstacles to overcome and great misunderstandings to adjust, and in view of this has accomplised a well-nigh impossible task in a manner which I leave to yourselves for judgment.

In closing, I want to thank the members of the Association, the Governors and officers, for their interest and support. It has been a pleasure to have been connected with this Association during this formative period; and I again wish to pay tribute to the President, Howard E. Coffin, for his unselfish generosity and patriotism. I am sure that with a continuation of the present interest and with all of you putting your shoulders to the wheel, it will not be so far in the dim and dark future until the Association's motto "Make America First in the Air," is a reality!

Committee Appointments

At the morning session the following committees were appointed:

Resolutions: Godfrey L. Cabot, Theodore Knight, Dr. G. W. Lewis, Dr. J. Frank Points, John W. Nattison, F. Logan, C. B. Fritsche, W. W. Meya, Howard Wehrle, M. F. Stack, Donald Douglas.

Nominations: R. F. Warner, L. D. Gardner, Dr. C. F. Marvin, Porter Adams, Theodore Knight, L. F. Sevier, Allen S. Hackett, L. D. Bell, E. W. Hammon, L. L. Boyer, Henry Wacker, S. J. McMahon, Geo. A. McClellan, E. F. M. Deeds, Donald Douglas.

Membership: R. F. Warner, C. J. Glidden, J. MacLaughlin, Allen S. Hackett, L. L. Milburn, H. J. Wilson, T. Vincent, T. Hamilton, E. B. Tracy, Walter H. Beech.

Finance: Godfrey L. Cabot, I. M. Uppercu, H. E. Hartney, Leonard Horner, B. F. Castle, C. Rodgers, C. H. Zimmermann, L. D. Bell, Victor Parker, C. F. Redden, Victor H. Ross, C. A. Morris.

Constitution and By-Laws: D. Macgee, C. Gray, G. Dalin, Wallace Kellett, L. L. Boyer, D. M. Outcalt, Henry Wacker, H. H. Emmons, R. R. Ferguson, Gen. Louis G. Fasher, Lloyd Stearman, Donald Douglas.

Legislation: J. MacLaughlin, C. R. Doland, M. Eston, C. T. Ludington, F. P. Lahm, Allen S. Hackett, J. A. Boettner, L. L. Custer, James Curian, Frank B. Harbachock, Howard Wehrle.

Rules and Procedure: R. F. Warner, H. E. Post, L. Hairns, H. E. Hartney, F. P. Lahm, V. C. Boyd, Roy Witt, Dr. J. Frank Points, D. M. Outcalt, L. L. Milburn, H. H. Emmons, A. T. Drotz.

Credentials: Porter Adams, Frank T. Coffyn, Roy Keyes, B. H. Mulvihill, C. E. Stanton, Dr. J. Frank Points, L. D. Bell, J. A. Boettner, T. Vincent, W. Keenan, C. H. Wolfley.

After the appointment of the committees the convention adjourned until the evening session.

Election of Officers

After the Annual Dinner, an account of which is given elsewhere in this issue, the convention was called to order by W. McCracken of Chicago, who was elected Chairman.

The first order of business was the election of officers. The By-Laws provide that fifty-two of the fifty-seven Governors shall be nominated one from each state. As all states were not organized or represented at the convention there was no response from many states.

Those states that responded with nominations follow:

Massachusetts, Porter Adams
New York, R. F. Hoyt
Porto Rico, Chas. R. Hartzell
Pennsylvania, S. T. Ludington
District of Columbia, Geo. Lewis
South Carolina, C. H. Chaffee
Alabama, S. S. McGee
Louisiana, Allen S. Hackett
Ohio, Glenn L. Martin
West Virginia, H. J. Wilson
Illinois, Dr. R. R. Ferguson
Michigan, Harold H. Emmons
Wisconsin, J. S. McMahon
Minnesota, Edward F. Chapman, Jr.
Iowa, R. W. Cram
Missouri, Carl Wolfley
Kansas, H. E. Meredith
Nebraska, Gould Deitz
Texas, Edward G. Tobin
Utah, C. L. Nelson
California, Donald Douglas

As there was no objection to the nominations, they were declared elected.

The Nominating Committee then made its report. It was read by Dr. C. F. Marvin. Through some misunderstanding, the unanimous vote of the Nominating Committee to offer Howard Coffin the presidency was not presented. The report of the Nominating Committee as read was as follows:

For President: W. Frank Carter
B. H. Mulvihill
For Vice-President: Porter Adams
For Treasurer: B. F. Castle
For Secretary: C. B. Tooke
Dudley Outcalt

L. S. Horner nominated Howard Coffin for the presidency. Mr. Coffin made a strong appeal to the convention to elect Mr. Mulvihill to the presidency. The name of Mr. Carter was withdrawn. Frederick B. Patterson of Dayton and Elmer Sperry of New York were also nominated. Mr. Sperry withdrew his name and Mr. Karr of Dayton requested that the name of Mr. Patterson be withdrawn.

The convention then went into executive session and after a general discussion, the convention reconvened and Mr. Coffin was elected President by a viva voce vote.

For Vice-President, in addition to the name of Mr. Adams presented by the nominating committee, Ralph H. Cram of Davenport, Iowa, and B. H. Mulvihill of Pittsburg were nominated. A roll call vote was taken and Ralph H. Cram was elected, it being made unanimous by vote of the convention.

For Treasurer, Col. B. F. Castle was re-elected by an unanimous vote.

For Secretary, Dudley Outcalt was elected over Mr. Tooke and Mr. Ludington.

The Membership Committee made its report, recommending that each member of the Association be urged to act as canvasser for members on a plan to be submitted later.

Resolutions Adopted

The following resolutions were presented by the Resolution Committee and adopted by the convention:

RESOLVED, That municipalities should recognize as a public duty the establishment and maintenance, at public expense, of landing fields both permanent and emergency, and of such size, equipment and location as to be conveniently accessible to centers of population for air mail, passenger, interurban, express and light freight service.

BE IT FURTHER RESOLVED, That the municipal authorities be urged to take the promptest possible action.

RESOLVED, That we recognize the United States Air Mail Service as the cornerstone of commercial aviation in this country, and incomparably the best individual air service in the world carried on for commercial purposes. It has thoroughly demonstrated the wisdom of Congress in furnishing the appropriations for this purpose.

The demonstration of transcontinental night air mail flying in August, 1923, marks a milestone in the progress of commercial aviation, and justifies the continuation of the most liberal financial support by the Congress.

RESOLVED, That it is the sense of this Convention that facilities for the purchase of gasoline and oil by commercial and sportsmen pilots be made available at Army, Navy and Air Mail Airdromes;

AND FURTHER RESOVED, That the Board of Governors take steps to promote the establishment of arrangements which will result in providing for said commercial and sportsmen pilots said facilities.

RESOLVED, That we heartily commend the action of the playgrounds and school authorities in various cities for their encouragement of model aircraft contests. And take the action to this end as promptly as possible.

RESOLVED, That it is the sense of the National Aeronautical Association that this is not an opportune time to propose in this country an international conference for a disarmament in the aircraft.

We render heartfelt thanks for the cordial hospitality we have here received and record our appreciation of the great work here accomplished for the welfare and future growth of aeronautics.

The initiative of the Flying Club of St. Louis; the patriotic and generous support, first of the St. Louis Air Board and then of the St. Louis Aeronautical Corporation, the assistance and encouragement of the Chamber of Commerce have contributed, in turn, to the success of the greatest event in the history of St. Louis, since the World's Fair in 1904.

RESOLVED, That we respectfully urge Universities and Colleges to attach increasing importance to the science of aeronautics whose many problems invade the realms of all scientific endeavor and recommend that its relation to each particular branch of engineering be emphasized in the regular courses of study prescribed for students.

The report of the Committee on Constitution and By-Laws presented many changes, all of which were adopted by the Convention. These changes referred to life memberships, election of governors, organization of states, dues allowed chapters, meetings of the Governors, meetings of the Executive Committees, Advisory Council, vacancies among officers.

Report of Finance Committee

The report of the Finance Committee was presented and the budget adopted by the convention. The report follows:

REPORT OF FINANCE COMMITTEE

Committee met at the Statler Hotel at 1.30 p. m. this date.

Present.

B. F. Castle,
F. C. Rodgers,
C. A. Morris,
J. M. Uppercu,
Victor Parker,
Charles F. Redden,
Godfrey Cabot,
H. E. Hartney.

Mr. Castle was elected Chairman and Mr. Hartney Secretary.

After due consideration the committee decided to recommend to the Convention the following budget for the year 1924.

Anticipated expenditures:

Rent	$ 1800.00	
Salaries:		
General Manager	3600.00	
Contest Committee	2500.00	
Chief Clerk	2000.00	
Janitor	360.00	
Stenographer	1620.00	
Clerks	2100.00	
Traveling Expenses	2000.00	
Contest Committee	2000.00	(Travel Expense)
Supplies	300.00	
Postage	1200.00	
Tel. and telegraph	600.00	
Insurance	32.00	
Bond	50.00	
Sundries	1000.00	
Printing	1800.00	
Audits	150.00	
Membership work	7500.00	
Reserve for contingencies	7400.00	
Sept. account payable	2355.00	
Total	$40267.00	

Anticipated income:

Membership	$10,500.00 less 5%	$7875.00
Interest		50.00
Miscellaneous income		600.00
Total		$8525.00

Amount to be underwritten $40,367.00 less $8525.00 .$31,842.00

The committee recommends that the Finance Committee of the Association endeavor to secure the underwriting of $50,000 and proposes that the convention authorize the Board of Governors to release to the Finance Committee 500 life memberships which may be issued to those individuals who will consent to underwrite a portion of the said $50,000. Further that the Convention suspend the section of the By-Laws applicable to these life memberships which provides that the proceeds of life memberships shall be invested and that only the income therefrom, shall be used for current expenses.

It is further recommended by the committee that the matter of establishing a scale of sanction fees from which the Association can derive income be considered by the Board of Governors.

There being no further business before it, the committee then adjourned, sine die.

H. G. HARTNEY
Secretary

Mr. Coffin Resigns

The reports of the other committees were heard and the convention adjourned.

On Tuesday morning, Oct. 2, the Governors held their first meeting and H. E. Coffin, who has served as President of the Association since its inception and whose reelection took place the night before, resigned as president. It was accepted

with the most sincere expressions of appreciation of the service rendered by him during the past year.

After due deliberation and a thorough canvass of the nationally known men interested in the promotion of the science of aeronautics and in activities related to national security and welfare, Frederick B. Patterson, of Dayton, President of the National Cash Register Company, was deemed the outstanding figure and was unanimously elected by the Board of Governors. Mr. Coffin continues as a member of the Board of Governors and as a member of the Executive Committee of the Association.

The following resolution was unanimously adopted:

"We express our gratitude and sense of the National obligation to Howard E. Coffin, without whose tireless industry and great ability the Association would not have been formed and whose munificence has chiefly sustained it; also, to B. H. Mulvihill, whose gratuitous and continuous devoted service have chiefly carried forward the work for the last year; also, to Mr. McCracken, Mr. Robertson, and the other unselfish and patriotic men who have worked with them, and us for the common welfare.

We pledge our continued support to this noble cause."

The Newly Elected Officers of the N.A.A.

Following there are some biographical notes on the newly elected officers of the N.A.A.

Frederick B. Patterson

When the National Aeronautic Association at its annual convention at St. Louis elected Frederick B. Patterson, of Dayton, Ohio, President, it selected one of the most progressive and enthusiastic men in the country to guide its destinies throughout the ensuing year.

Mr. Patterson is interested in the development of aviation for its commercial value as well as to make it dependable shou'd our country ever be ensnared in another war. It could almost be said that his interest was inherited, because aviation had no stronger advocate than his father, the late John H. Patterson. For years before the death of the senior Patterson he laid plans in the interest of aviation, and spent both time and money generously for that purpose. He was an enthusiastic advocate of a separate air service, believing that the Air, Army, and Navy should be under one directing head, but separate departments. Whether the son will take up such a program at the present time is not known.

Soon after his father's death, Frederick B. Patterson took up the fight both locally and nationally for aviation's development. In a local way he saved McCook Field for Dayton. Upon learning that because of its inadequacy the government intended to remove it to some distant point, Mr. Patterson made an investigation of fields in the vicinity of Dayton, and when he found that there was a tract of 5000 acres just east of the city limit that could be purchased, he set out to acquire it and offer it to the United States Government as a permanent field for experimental aviation work. In the remarkably short time of thirty-six hours he raised by popular subscription more than $400,000 from public-spirited citizens of Dayton and purchased the land. This land, which surrounds the present site of Wilbur Wright flying field has been formally accepted by the government and plans are being made for its early development.

Mr. Patterson was formerly President of the Dayton Chapter of the Aero Club of America, and at the time of his election to the presidency of the National Aeronautic Association he was serving as President of the local chapter of that body.

As President of The National Cash Register Company, of Dayton, Ohio, the largest concern of its kind in the world, Mr. Patterson is a worthy successor to his distinguished father, the founder of the business and the pioneer in industrial welfare work, whose name is known the world over wherever a cash register is in use. The elder Patterson especially trained his son to take up the work as executive head of the great industry created by his genius and ability, when he was prepared to lay aside the burden and take a much needed rest from active participation in the conduct of the business. John H. Patterson was a native of Dayton, and all of his useful life was one of its foremost and most practical of public-spirited citizens. Space forbids telling all of his great work in the community. Suffice it to say that he was always foremost in any move for the betterment of his beloved city, and no one man contributed more to the great industrial development and growth of the city than he. Born in 1844, of Revolutionary stock, he served his country in the Civil War. In 1882, he began making cash registers, and ten years later he introduced industrial welfare work

Frederick B. Patterson, newly elected president of the National Aeronautic Association

and became known as "the best employer in America." Later, he put in force a profitsharing plan, established schools and conventions for his salesmen, and made the National Cash Register Co. one of the most interesting and educational institutions in the industrial world. He was the outstanding heroic figure during the Dayton flood in 1913, and it was he that proclaimed the Citizens' Relief Association, being commended by the United States War Department for his work. He deeded 294 acres to Dayton for a recreation park. Mr Patterson was one of the first to propose the commission form of government, known as the Dayton plan. At the outbreak of the war he placed his entire establishment at the disposal of the government and was a power for good in patriotic work and efficiency in industrial effort. The National Cash Register Co. employs about 7000 people and it has branches all over the world.

Frederick B. Patterson was born in Dayton, Ohio, June 22, 1892, and was educated at the public schools of Dayton, Adirondack and Florida Schools for two years, supplemented by a course abroad in England at Chatham House. After completing his schooling in 1910, he entered the employ of the National Cash Register Co., at Dayton, Ohio, beginning

in the humble capacity of foundryman's helper and going through the various manufacturing departments, including the tool room, pattern shop, advertising department, sales department, assembly department, etc. He mastered the details of the business and familiarized himself with the workings of the company from the ground up, obtaining a practical knowledge of the manufacturing as well as the executive, which has fitted him to ably fill his present position as executive head of the company to which position he was advanced on July 18, 1921, and to which he has devoted his entire time and attention.

Mr. Patterson was for three years at the Canadian plant of the National Cash Register Co., at Toronto, Ont., as assistant manager, and for three years was head of the Foreign Department, at Dayton, Ohio.

He is also a director in the Canadian Company (Toronto), the German Company (Berlin), the English Company (London).

He is a member of the New York Athletic Club, Miami Valley Hunt and Polo Club, the Dayton Country Club, all of Dayton, Ohio; also the Thousand Islands Yacht Club and of the Masonic Fraternity.

During the World War Mr. Patterson was assigned to the 15th Photographic Section, Air Service, and was in France six months, participating in the St. Mihiel battle. He was mustered out of service in 1919, and returned to his work at the National Cash Register Co.

Mr. Patterson was married Jan. 3, 1917, to Miss Evelyn Huffman, of Dayton, Ohio.

Ralph W. Cram, vice-president, National Aeronautic Association

Col. Benjamin F. Castle, treasurer, National Aeronautic Association

Ralph W. Cram

Ralph W. Cram, vice president of the National Aeronautic Association was born June 19, 1869, at Zanesville, Ohio, the son of Charles W. Cram and Clara Deming Cram.

After being educated in public schools, he took up newspaper work and made this his profession for forty years. He is editor of the *Democrat and Leader* of Davenport, Iowa.

Mr. Cram has for a long time been keenly interested in aeronautics, and is an enthusiastic believer in air travel, using the airplane on every possible occasion.

He was elected president of the Commercial Aeronautical Association of the Seventh Corps Area at Sioux City, Iowa, in March, 1922. He was a signer of the Charter of the National Aeronautic Association at its convention in Detroit in 1922, where he was elected vice-president and governor for the Seventh District. He is chairman of the Aviation Committee of the Davenport Chamber of Commerce and author of the pamphlet "Aviation—Its Development and Its Relation to the National Defense." He has been a leader in the Middle West publicity campaign for commercial aviation, and was instrumental in retaining for Davenport a 100 acre landing field.

It will be seen from these activities that Mr. Cram has given a large amount of time and effort, as well as space in his paper, to urge and foster the deevlopment of aviation as an essential factor of national prosperity and national security.

Mr. Cram married Mabel LaVenture on Dec. 27, 1892.

Benjamin F. Castle

Benjamin Frederick Castle, treasurer of the N.A.A. was born May 11, 1884, at Portage, Wis., the son of Frederick G. Castle and Frances Gould Castle. He received his education in the West Division High School at Milwaukee, and later entered the U. S. Military Academy at West Point.

Mr. Castle was for twelve years an officer in the United States Army. He was appointed Second Lieutenant, 29th Infantry in 1907, and served with this rank until 1914, when he was promoted to First Lieutenant and transferred to the 15th Infantry with which he served until 1917, being promoted to Captain in the meanwhile. In August, 1917, he was promoted to Major and detailed to the Aviation Section of the Signal Corps where he was placed in charge of selecting and inspecting flying fields for the Air Service. After obtaining his flying instruction at Rockwell Field, Calif., from

March to July, 1918, he was appointed to the Control Board of the Air Service, Washington, D. C., and promoted to the rank of Lieut. Colonel. He was then attached to the United States Liquidation Commission as Air Service representative, with headquarters in Paris, France, from February to July, 1919, when he was appointed air attaché at the American Embassy in London, England.

Mr. Castle is a banker by profession and is connected with the Irving National Bank, New York. He married Winnifred A. Walker in 1907.

Dudley M. Outcalt

Dudley Miller Outcalt, secretary of the N.A.A., attorney at law, was born May 8, 1897, at Cincinnati, Ohio, the son of Dudley C. Outcalt and Mary Louis Slack Outcalt.

He was educated in Cincinnati high school, University and College of Law. After serving as private in the machine gun company of the 147th Infantry, from April to September, 1917, he enlisted as a cadet in the Aviation Section of the Signal Corps, U. S. Army. After ground and flying training received in Columbus, Ohio, Rockwell Field, Calif., and Issoudun, France, from October, 1917, to April, 1918, he was attached to the School of Observation in Tours, France, and later assigned to the 90th, 141st, 95th and 94th Aero Squadrons, flying with the latter over the lines. He was promoted to Second Lieutenant, February, 1918, and served with the Army of Occupation until April, 15, 1919. He was honorably discharged June 9, 1919.

Mr. Outcalt is a practicing attorney at law in Cincinnati. He married Louisa Katherine Crook, Sept. 25, 1920.

He is a member of the National Aeronautic Association, American Legion, Cincinnati Bar Association and Lawyers' Club of Cincinnati, and vice president of the Grisard Field Co. which operates the landing field at Cincinnati.

Prizes Presented to Contestants at Smoker

On Saturday, Oct. 6, the usual Smoker held after all race meets was held at the Hotel Statler. Hugh Robertson acted as master of ceremonies. In presenting the trophies it was announced that technically five days would have to elapse during which protests could be received before the Contest Committee could officially give possession of the trophies.

Presentation of Pulitzer Trophy

The Pulitzer Trophy was presented to Ensign A. J. Williams, U.S.N., whose speed of 243.67 broke all world's records, by Ralph Pulitzer. Mr. Pulitzer said that the intention of his brothers and himself in giving the trophy was to encourage the development of aviation in the United States by stimulating either speed or endurance or both. They thought that speed would include endurance more than vice versa. Finally speed was selected and he said he thought that the object of the trophy had far exceeded their greatest hopes. In accepting the premier trophy of all aviation, Ensign Williams said that it was the one success he had always hoped for and was satisfied. He added that the race could hardly be so termed for he felt lonesome and all the time was looking for the other plane piloted by Lieutenant Sanderson.

Col. Frank P. Lahm, Chairman of the Contest Committee, called on Geo. S. Johns, Editor of the St. Louis *Post-Dispatch*, to present the prizes for the On-to-St. Louis Race. Mr. Johns said that St. Louis had asked for the races and had found that they had asked for more than they anticipated but the result would be that they had made a financial success of the races and had a permanent landing field. He then presented "Casey" Jones with first prize, H. F. Cole with second money and W. W. Meyer with third.

The Flying Club of St. Louis Trophy was presented by Randall Foster, President of the St. Louis Aero Club. First place was won by Walter E. Lees, second by Perry Hutton and third by "Casey" Jones. In accepting first prize Mr. Lees complimented Fred Charavay, the designer of the Hartzell FC1 plane that won the race.

In presenting the William A. Mitchell Trophy to Capt. Burt E. Skeel, General Patrick promised Captain Skeel that he could fly in the Pulitzer Trophy race next year when he hoped that he would fly 100 mi. faster than he did in his MB3, or 246 mi./hr., which would be faster than the Pulitzer race speed made at St. Louis.

Symbolism of the Liberty Trophy

Harold H. Emmons, President of the Board of Trade of Detroit, gave a very interesting history of the Liberty Engine in presenting the Liberty Engine Builders' Trophy. The Liberty engine, he said, represented more of the vibrant and energetic force of American industry than any other war product. It was the outstanding industrial feat of the war. The men behind its development wished to have the achievement perpetuated and presented the trophy. He presented the trophy to Lieut. C. McMullen.

At this point, Orville Wright, who had to leave to take a train, was introduced and as usual his remarks were brief. "I never expected to see such speed," were his parting words to the crowd.

Carl Fritchie spoke for the Aviation Country Club of Detroit. He paid a great compliment to St. Louis by saying that while Detroit has wanted to be the aviation center of the United States, if St. Louis which has held a meet which eclipsed any sporting event of the ages, will follow through they will eclipse Detroit, but he added Detroit will always be glad to build the engines. He presented both the speed and merit prize to J. Atkinson who won in the Bellanca.

Martin J. Collins, Chairman of the Entertainment Committee of the St. Louis Air Board, made the oratorical effort of the evening in presenting the Merchants' Exchange Trophy. He eulogized St. Louis and Missouri to such an extent that, in order to prevent the broadcast listeners who were enjoying the meeting by radio from becoming too vain, it was found necessary to disconnect the microphone. His references to the entertainment have brought many longing enquiries from some of the dry districts. After he had exhausted the statistical analysis of Missouri chickens and the egg crop, he presented the trophy to Lieut. H. L. George, who won it in a Martin Bomber.

Admiral W. F. Fullam, beloved by all aviators, presented the Detroit News Air Mail Trophy to Air Mail Pilot J. F. Moore, winner of this event.

The Mulvihill Model Trophy which had not arrived could not be presented but the winner's name was announced.

High Water Mark of American Aviation

Howard Coffin was then introduced and spoke enthusiastically concerning the success of the races. He pointed out that 300,000 mi. were flown without casualties of any kind. Added to the mileage flown at Detroit, he estimated that a half million miles had been covered under racing conditions without a serious accident. It represented he believed the high water mark in American aviation.

He emphasized the fact that while we hold practically all records in aviation except altitude that we are not progressing in aviation as we should. Until we convert this utility into commercial aviation we will make little progress. Our Army and Navy will not be safe, he said, until it is backed by a strong commercial aviation.

Mr. Coffin was followed by Admiral Moffett who praised the Navy pilots and the Curtiss and Wright companies whose machines had brought the Navy victory. He spoke particularly of the cooperation he had received from the National Aeronautic Association and the Aeronautical Chamber of Commerce. He complimented St. Louis by remarking that "St. Louis had done more for aviation than any other city to date."

General Patrick in his gracious way congratulated the Naval Air Service, but warned them that next year the Army Air Service intended to move up where it belonged. He praised the victorious pilots for their skill and daring. He

then pointed out the urgency of national support for aviation. He hoped that the East and the West and the North and the South will call for aviation.

W. Frank Carter, President of the St. Louis Air Board, was very happy over the success of the meet. He thanked every one who had a part in the meet. He was grateful that St. Louis had been selected for it had enabled St. Louis to establish a flying field which will always be a memorial to the war aviators of St. Louis. He particularly praised the efforts of Joseph Pulitzer, George S. Johns, Albert B. Lambert, Col. Albert Perkins, J. Rankin, Carl Meyer and others.

After the smoker, the visitors were given an entertainment by local talent that will be remembered long by those privileged to remain to enjoy it. The success of the smoker reflects the greatest credit of its organizer, Hugh Robertson.

Distinguished Guests at St. Louis

There were so many distinguished figures in the aviation world at St. Louis that it was impossible to secure all their names.

Orville Wright and his sister, Miss Katherine Wright, received an ovation wherever they went. Glen H. Curtiss and Glenn L. Martin and many other pioneers in American aviation attended the races.

There follows a list which, though incomplete, gives an idea of the interest the St. Louis races aroused.

Foreign Guests

Maj. Gen. H. Haraguchi, I.J.A., Japanese Military Attaché; Maj. N. Ohtsuka, Japanese Military Inspector; Capt. Osami Nagano, Japanese Naval Attaché; Lieut. Munetaka Sakamaki, Japanese Asst. Naval Attaché; Comdr. Mario Calderara, Italian Air Attaché; Hon. Stan Spacek, Czechoslovakian Technical Attaché; Comdr. M. G. Christie, British Air Attaché; Phya Buri Navarasth, Siamese Minister; Capt. Georges Thenault, French Air Attaché; Lieut. Virginius de Lemare, Brazilian Air Attaché; Dr. S. F. Bedoya, Secy. of Peruvian Embassy; Pedro Guevera, Philippine Commissioner; Wing Comdr. J. L. Gordon, Canada; Sq. Leader W. Hume, Canada.

Army Guests

Hon. Dwight F. Davis, Asst. Secy. of War; Maj. Gen. Mason M. Patrick, Chief U. S. Air Service; Maj. Lawrence W. McIntosh, Maj. W. G. Kilner, Maj. W. A. Robins, Maj. Shepler W. Fitzgerald, Maj. J. F. Pirie, Maj. F. L. Martin, Maj. W. C. Sherman, Maj. H. A. Dargue, Maj. Thomas H. Lamphier, Maj. W. C. McChord, Maj. Roy Brown, Maj. Carl Spatz, Maj. M. F. Scanlon, Maj. Horace Hickam, Col. J. H. Howard, Col. James Culver, Col. James Fechet, Col. Frank Lahm, Capt. R. L. Walsh, Capt. E. Adler, Capt. T. E. Tillinghast, Capt. St. Clair Streett, Maj. William Kuntz, Maj. C. L. Tinker, Lieut. E. M. Powers, Lieut. W. A. Maxwell, Lieut. H. W. Beaton, Lieut. T. P. Wagner, Lieut. E. Halterman, Maj. B. Q. Jones, Capt. Ernest Clark, Lieut. V. E. Bertrandias, H. D. Smith, Aubrey Hornsby, Ross F. Cale, J. F. Whiteman, G. H. Beverly, G. C. Kenney, J. J. O'Connell, W. H. Bleakley, D. M. Alcott, H. K. Raney, T. Larsen, E. J. Meloy, C. McMullen, H. N. Heisen, L. H. Smith, S. M. Connell, L. J. Maitland, Capt. R. Oldys, Capt. E. C. Black, Lieuts. W. H. Brookley, Lee Wade, H. P. Arnold, H. L. George, H. G. Crocker, R. J. Brown, M. S. Fairchild, A. Pearson, J. D. Corkille, W Miller, T. W. Blackburn, T. K. Matthews, G. P. Tourtellot, V. B. Dixon, J. T. Johnson, Bert E Skeel, J. K. Cannon, H. H. Mills, L. V. Beau, L. C. Hord, F. O. D. Hunter, A. G. Liggett, L. C. Simon, E. M. Haight.

Navy Guests

Rear Admiral W. A. Moffett, Chief Bureau of Aeronautics; Lieut. Comdr. M. A. Mitscher; Lieuts. B. R. Holcombe, W. D. Thomas, H. B. Brow, S. W. Calloway, A. J. Williams, M. A. Schur, D. C. Allen, L. H. Sanderson, G. B. Hall, C. Whitmore, Ralph Davison, F. W. Pennoyer, C. McGauley, W. L. Peterson; Brig. Gen. Logan Feland, U.S.M.C.; Col. A. Turner, U.S.M.C.; Comdrs. W. W. Webster and Jerome Hunsaker; Boswn. E. E. Reber.

Federal Government Guests

Hon. Paul Henderson, 2nd Asst. Postmaster General, in charge of Air Mail; Hon. W. Irving Glover, 3rd Asst. Postmaster General; U. S. Senator Selden P. Spencer; U. S. Senator James A. Reed; U. S. Representatives Allen F. Moore, E. E. Denison, Andrew J. Hickey, Richard Yates, Gilbert N. Haugen, A. M. Free, Harry B. Hawes, Leonidas C. Dyer; Dr. G. W. Lewis, Secy. Nat. Advisory Comm. for Aeronautics; Comdr. F. C. Billard, U. S. Coast Guard; Lieut. E. F. Stone, U. S. Coast Guard.

Aeronautic Guests

I. M. Upperce, Charles F. Redden, Roland Rohlfs, Lester D. Gardner, Ladislas d'Orey, Ralph H. Upson, Carl B. Fritsche, H. V. Thaden, Charles J. Glidden, Howard E. Coffin, B. H. Mulvihill, Otto Praeger, C. E. Stanton, Col. B. F. Castle, John Coleman, Glenn L. Martin, Lawrence D. Bell, Frederick B. Rentschler, C. G. Peterson, George S. Wheat, Charles L. Lawrance, J. Thurston, E. T. Booth, Arthur J. Davis, Col. Harold E. Hartney, C. T. Ludington, W. Wallace Kellett, A. V. Verville, Elmer Sperry, Lawrence Sperry, E. von Morgen, H. A. Bruno, R. B. C. Noorduyn, Morris L. Sinsabaugh, W. L. Gilmore, C. Roy Keys, William Wait, Jr., Beckwith Havens, G. M. Bellanca, Myles Standish, Samuel S. Bradley, Luther K. Bell, E. F. Gallaudet, Grover C. Loening, Godfrey L. Cabot, Porter H. Adams, L. F. Sevier, Dudley Miller Outcalt, R. J. Walters, Van H. Burgin, Charles S. Reiman, Ralph W. Cram, Edgar C. Tobin, William F. Long, P. G. Johnson, C. H. Messer, Col. Frank S. Lahm, Frank T. Coffyn.

Guests from a Distance

Ralph Pulitzer, New York *World;* Harold McCormick, Pres. International Harvester; Robert M. Cowie, American Express Co.; Edwin F. Leonard, Mayor of Springfield, Mass.; Andrew J. McShane, Mayor of New Orleans; Fred Kohler, Mayor of Cleveland; Walter A. Sims, Mayor of Atlanta; Rowlett Paine, Mayor of Memphis, Tenn.; Peter F. Sullivan, Mayor of Worcester, Mass.; A. H. Bowman, representing Mayor of Louisville, Ky.; B. A. Brennan, Pres., Fidelity Securities Corp., Baltimore; Col. Laurence La Tourette Driggs, Commanding Air Unit, N. G., New York; Capt. George L. Bumbaugh, Indianapolis; George O. Boardman, Secy., Western Railways Committee, Chicago; Benedict J. Baker, Boston.

Guests from Missouri

Gov. Arthur M. Hyde, Jefferson City; Morris Anderson, Mayor of Hannibal; Victor Hemphill, Mayor of Carlinville; C. W. Thomas, Mayor of Jefferson City; Col. Charles L. Potter, St. Louis; Sam. B. Cook, Jefferson City; Charles G. Buffum, Louisiana; A. A. Speer, Jefferson City; James C. Welsh, Elsberry; C. E. Porter, Bowling Green; W. C. Harris, Fulton; Chris. R. Maffry, Macon; J. F. Rauch, St. Charles; C. B. Bowling, Columbia; W. S. McLucas, Kansas City; W. H. Powell, Sedalia; Lou E. Holland, Kansas City; G. O. Perry, Moberly.

Not 300 Miles per Hour

Eye weariness caused by the great pressure of work incident on the National Air Races, and perhaps also the practice of expressing airplane performances now in miles, now in kilometers, was instrumental in producing a most regrettable slip of the pen in our issue of Oct. 15. It was stated on page 469 that "the two Wright Fighters flew the race with only six one-hundredth of a mile per hour difference in speed—*300.00* and *300.06* mi./hr—a truly wonderful show of steadiness on the part of engines and pilots alike."

Of course, as may be evident from the figures given elsewhere in the story of the Pulitzer race and in the table of performances published, the speeds of the two ships were *230.00* and *230.06* mi./hr., respectively. It is curious to note that although four persons checked that story with what seemed the most minute care, yet not one of them noticed the error in question. All of which shows that the human machinery will fail once in a while.

Review of the Air Mail Night Flying Trials

Thirty-Day Test Recommended as the Basis of New Coast to Coast Service

By PAUL HENDERSON
2nd Asst. Postmaster General

It became apparent to me, considerably over a year ago, that before the Air Mail Service might offer to the Post Office Department its full measure of value it would be necessary to operate the planes of the service at night as well as in the day-time.

The reasons for this conclusion are so obvious as to need but little explanation. If the airplane has value as a postal transportation agent it is because of its high speed. Its nearest competitor is of course the railroad train. To successfully compete with the railroad train it must be able to operate at night as well as in the day-time. Then, too, overnight transportation between important industrial centers is a postal accomplishment always aimed at and only capable of achievement by railroads when the distance concerned is less than 500 mi.

The airplane, it seemed to me, would enable the Department to extend this 500-mi., over-night radius to from 1,000 to 1,400 mi. if it were found feasible of operation at night.

Preparation

Acting under the authority of the Postmaster General, about May 1, 1922, the Air Mail Service undertook an intensive study of the question of night operation in all of its phases. It was found that up to this moment there had been no regular or scheduled operation of aircraft at night excepting that which took place during the war and which was extremely hazardous.

I engaged as a special assistant to the General Superintendent of the Air Mail Service an engineer, in the person of J. V. Magee, and made him responsible for the study of the problems presented.

Mr. Magee worked in cooperation with Mr. Egge, the General Superintendent of the Air Mail Service, other field officials, pilots, etc., studying every angle of the situation. Much advice was given by people experienced in aviation. Some of the advice was good. Some was bad. The majority of it was discouraging. Some little of it was encouraging. Splendid cooperation was had at the hands of manufacturers of illuminating equipment of various kinds The General Electric Company, the American Gas Accumulator Company, and the Sperry Instrument Company, were particularly thorough in the assistance rendered.

The Army Air Service Laboratories at Dayton, Ohio, also furnished much important data, information and help, as did also the National Advisory Committee for Aeronautics.

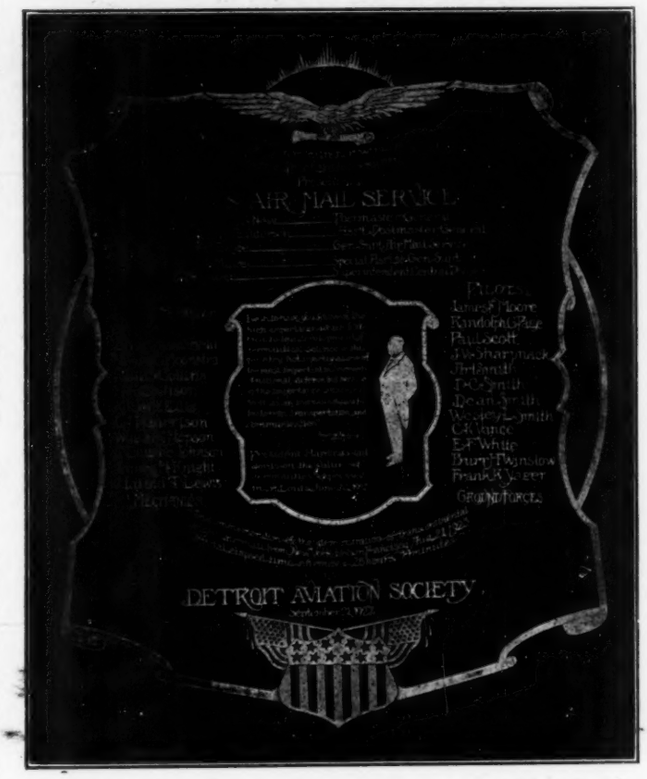
After several months of this research work, a definite plan was arrived at, which provided for the placing of a small acetylene intermittent light, every three miles of the course between Chicago, Illinois, and Cheyenne, Wyo. It further provided for the locating of an emergency landing field approximately every 25 mi. of distance concerned. (There are 34 such emergency landing fields.) On each of these emergency fields our plan provided for an 18-in. incandescent searchlight type of light revolving in a horizontal plane, with a frequency of six times per minute. Our plan further provided for the indicating of the boundaries of these 34 emergency fields with lights, either acetylene or electric.

From Chicago to Cheyenne, inclusive, we have five regularly established air mail landing fields. These, for the purposes of our night flying, we term terminal fields. Our plan called for the establishing on each of these fields of a 36-in., high intensity, arc light type of search light, revolving in a horizontal plane with a frequency of three times per minute.

All buildings in and around these terminal fields were, under our plan, to be flood-lighted, in an attempt to as nearly as possible imitate day-time perspective. All near-by obstructions, such as trees, flag poles, etc., were to be flood-lighted or otherwise illuminated.

This plan was adopted by us in its entirety about the middle of April, 1923, and work was started on the lighting of this Chicago-Cheyenne course as indicated by the above plan.

Slight deviations from the original plan were found necessary in its practical application to the course. For instance, it was found impossible to locate the 34 emergency landing fields at precisely 25 mi. intervals. Some are as close together as 15 mi.; others as far apart as 30 mi.



Bronze plaque presented to Postmaster General New by the Detroit Aviation Society in commemoration of the 28 hr. transcontinental air mail service

Our pre-arranged plan was, however, carried out in all of its essential details, and about the 15th of August we found ourselves with our lighted airway practically completed from Chicago to Cheyenne.

Night Flying Ships

Early in our study of the night flying problem as a whole, it was concluded that more success might be looked for in our work if it were to have airplanes which might land at a lesser speed than that necessary with the remodeled DH type of craft which we are now using.

Early this spring, orders were given to three aircraft manufacturers for a few experimental planes, which were to be so designed and built as to land at a speed 15 or 20 mi. slower than the landing speed of the DH. An order was given to one manufacturer for the building of a set of wings for a standard mail type DH, on a design which it was represented

would decrease the landing speed of the DH to approximately 45 mi./hr.

Within our own organization, certain officials were given permission to build a special DH from plans of their own conception which it was thought might have a reasonably slow landing speed.

None of these ships were finished in time to use for our experimental flights. A few of them have now been received but none of them has yet been tested sufficiently to warrant my making any report to you as to its merit or lack of merit.

Failing to receive these ships in time for our tests, we equipped 10 regular mail carrying DH planes with navigating lights, tail lights, instrument board lights, and powerful headlights.

Eight of these ships were the ones used in our tests, two of them being held in reserve.

Attitude of Pilots

When it first became of general knowledge among the men in the Air Mail Service that we were going to attempt to fly at night, the reaction from the pilots was, to say the least, not encouraging. However, as the pilots became familiar with the plans which we were considering, and later, as they saw our definite preparations being made, they began to look on the matter in a different light and several of them, absolutely of their own accord, volunteered to fly at night during the test which we were then arranging for.

I believe that now all of the pilots in the service, with possibly two or three exceptions, are perfectly willing to fly at night providing proper ground preparation and ship are provided.

The following pilots flew during the experimental tests. (Those whose names are marked as reserves stood by as reserve pilots during the test, and all have had several hours in the air at night in unofficial test flights made before the official tests of Aug. 21-24.)

Ernest M. Allison,	James F. Moore,
L. H. Garrison,	Dean C. Smith,
W. C. Hopson,	Frank F. Yager,
J. H. Knight,	R. G. Page (Reserve)
Harold T. Lewis,	E. F. White (Reserve)

Experimental Operation

Appended is a tentative schedule set up for our experimental operation. Following the tentative schedule is a tabulation showing the schedules actually maintained during the test.

You will note that with the exception of the eastbound movement on the first day of the test all of the schedules actually maintained are better from the point of view of speed than those which were tentatively established.

As far as the night flying part of our test flights is concerned, our operation was 100 per cent satisfactory. There were no forced landings, no defaults, no accidents, in fact no near-accidents.

Looking at the test from the point of view of a transcontinental mail service, there was but one interruption to a 100 per cent achievement. That occurred on the afternoon of the 21st, just west of Cheyenne, Wyo., on that part of the course which is flown over in the day time. The eastbound ship was forced to land at Laramie, Wyo., about five o'clock in the afternoon, because of an unusually heavy fog. All efforts of the pilot to penetrate this fog failed until the following morning.

In order that the night flying might continue for the entire test, when it became apparent that this pilot could not come through from Laramie to Cheyenne, I broke his connection by starting his relay out of Cheyenne at 8.34 p. m.

The mail which was on the ship held in the fog at Laramie came through on the ship which followed 24 hr. later.

The best time made eastbound on any of the four days was 26 hr. and 14 min. The best time westbound was 29 hr. and 38 min.

Too much credit may not be given to the pilots and mechanics of the entire service, and particularly of the Central Division, for their enthusiasm, industry and intelligent cooperation during all four days of this test.

Mr. Egge, the General Superintendent of the service, has been untiring in his application to this performance, and he has been ably assisted on the questions of the many complex details by Superintendent D. B. Colyer of the Central Division. The ground forces of the Central Division entered into the work of preparation and of actual operation during the test with remarkable enthusiasm, and to them is due much of the credit for the successful carrying out of our plans.

Conclusion

I think that the one outstanding conclusion arrived at as a result of this experiment is that it is feasible and practical to operate aircraft at night over properly lighted and prepared airways.

I think that it is safe to conclude that speed practically equal to that made during the daylight hours may be maintained at night.

There is as in all other types of transportation a certain element of hazard in all air navigation. We have developed rather definite statistics on this question of hazard as it relates to daytime flying. No such statistics are available on night flying. None can be collected except over a rather lengthy period of regular scheduled operation. This fact makes it rather difficult to predict as to what degree of regularity of service might be expected should our transcontinental service be made a regular thing.

Recommendations

I recommend to you that the Air Mail Service be authorized to open up this transcontinental service on a schedule not unlike that proposed for the test operation, at as early a moment as may be consistent with sound preparation. The first thirty days of this operation should, I suggest, be termed a thirty-

Tentative Schedule

WESTBOUND

Leave		*Arrive*	
New York	11.00 a. m. ET	Cleveland	3.45 p. m. ET
Cleveland	4.00 p. m. ET	Chicago	6.45 p. m. CT
Chicago	7.00 p. m. CT	Omaha	11.45 p. m. CT
Omaha	12.01 a. m. CT	Cheyenne	4.15 a. m. MT
Cheyenne	4.30 a. m. MT	Salt Lake City	9.45 a. m. MT
Salt Lake City	9.00 a. m. WT	Reno	2.00 p. m. WT
Reno	2.15 p. m. WT	San Francisco	4.15 p. m. WT

EASTBOUND

Leave		*Arrive*	
San Francisco	6.00 a. m. WT	Reno	8.00 a. m. WT
Reno	8.15 a. m. WT	Salt Lake City	2.15 p. m. MT
Salt Lake City	2.30 p. m. MT	Cheyenne	6.30 p. m. MT
Cheyenne	6.45 p. m. MT	Omaha	12.45 a. m. CT
Omaha	1.00 a. m. CT	Chicago	5.30 a. m. CT
Chicago	5.45 a. m. CT	Cleveland	10.15 a. m. ET
Cleveland	10.30 a. m. ET	New York	3.15 a. m. ET

Actual Schedule

EASTBOUND

Aug.	*21*	*22*	*23*	*24*	
Left	5.59 A	5.26 A	6.00 A	5.28 A	San Francisco, Calif.
Arrived	7.46 A	7.07 A	8.06 A	7.19 A	Reno, Nev.
Arrived	10.14 A	9.24 A	10.29 A	9.37 A	Elko, Nev.
Arrived	12.13 P	11.15 A	12.26 P	11.28 A	Salt Lake City, Utah
Arrived	3.00 P	1.51 P	3.01 P	1.54 P	Rock Springs, Wyo. MT
Left	8.34 P	4.20 P	5.27 P	4.05 P	Cheyenne, Wyo.
Arrived	12.02 A	7.26 P	8.39 P	7.09 P	North Platte, Neb.
Arrived	3.16 A	10.21 P	11.27 P	10.29 P	Omaha, Neb.
Arrived	6.22 A	12.50 A	1.44 A	12.35 A	Iowa City, Ia. CT
Arrived	8.40 A	3.00 A	3.50 A	2.28 A	Chicago, Ill.
Arrived	... ′	... ′	... ′	... ′	Bryan, Ohio
Arrived	12.50 P	8.27 A	7.46 A	8.10 A	Cleveland, Ohio
Arrived	... ′	10.19 A	... ′	... ′	Bellefonte, Pa. ET
Arrived	4.14 P	12.21 P	11.14 A	11.17 A	New York, N. Y.
Elapsed Trip Time:	Incomplete	27.55	26.14	26.49	′No stop.

WESTBOUND

Aug.	*21*	*22*	*23*	*24*	
Left	11.01 A	11.01 A	10.56 A	11.04 A	New York, N. Y.
Arrived	1.23 P	1.27 P	1.16 P	1.17 P	Bellefonte, Pa. ET
Arrived	4.14 P	3.53 P	3.34 P	3.41 P	Cleveland, Ohio
Arrived	5.05 P	... ′	... ′	... ′	Bryan, Ohio
Arrived	6.50 P	6.09 P	5.59 P	6.17 P	Chicago, Ill.
Arrived	8.47 P	8.07 P	8.05 P	8.26 P	Iowa City, Ia. CT
Arrived	11.02 P	10.45 P	10.50 P	11.12 P	Omaha, Neb.
Arrived	1.29 A	1.22 A	1.40 A	1.47 A	North Platte, Neb.
Arrived	2.50 A	2.54 A	3.34 A	3.38 A	Cheyenne, Wyo.
Arrived	11.16 A	7.00 A	6.46 A	6.52 A	Rock Springs, Wyo. MT
Arrived	12.53 P	8.33 A	8.24 A	8.31 A	Salt Lake City, Utah
Arrived	2.00 P	9.33 A	9.30 A	9.37 A	Elko, Nev.
Arrived	4.32 P	11.48 A	11.46 A	11.52 A	Reno, Nev. WT
Arrived	6.24 P	1.45 P	1.34 P	1.44 P	San Francisco, Calif.
Elapsed Time:	34.23	29.44	29.38	29.40	′No stop.

day test, which would give opportunity for a recess in operation should there be developed during those thirty days details needing further correction.

I recommend that postage be charged just as was originally planned, on the basis of three zones, with stamps for the first zone at 8 cents, for the second zone at 16 cents, and for the third zone at 24 cents.

I recommend that the Post Office Department's air activities be confined to this route for a period of not less than one year, in order that the unknown factors of risk and hazard at night be determined.

It is impossible to forecast the revenue which may be derived from such a service. No sound estimate may be made now as to the volume of mail which will be offered for transport. Only the experience of several months will give us the figures upon which to base a statement as to the probable income from such a service. With the service established, it is necessary that the public be made aware of its reliability, its regularity and of its advantages.

Things Yet to Do

Before the Air Mail Service might undertake the operation of this transcontinental route, as per the above recommendation, it will be, in my opinion, necessary that certain things be done. First, ships should be provided which will have all of the desirable qualities of the present DH but which may be landed at a less speed than that necessary with the DH. Second some sort of device should be provided which will give proper warning when any of the three-mile beacon lights is extinguished. Third, if possible we should provide our pilots with a workable radio telephone outfit, provide headlights for the ships themselves, a little better than those which were used during the test; extend our lighted airway for approximately 150 mi. west of Cheyenne and an equal distance east of Chicago.

I realize that much of our future activity will of course depend upon our available supply of money. I am preparing a careful estimate of what it will cost to do those things that are recommended in this report, and will be able, within a few days, to give you that, together with a report on what money remains from this year's appropriation.

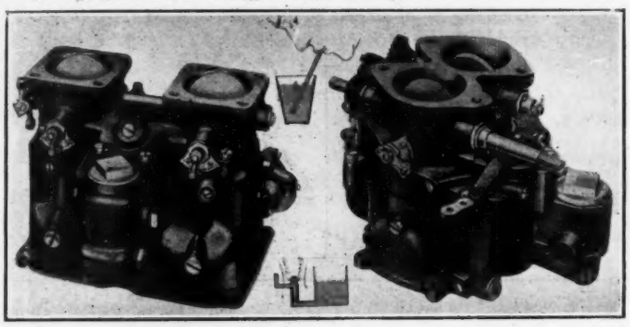
Judging from the letters and telegrams which have come to my desk since this test, I am of the opinion that the Post Office Department will be in receipt of many requests for extension of this night operated service to and between points not now included on our transcontinental route. I would like to urge that the Department refuse to act favorably on any such requests until the Air Mail Service has had an opportunity to operate for some substantial period over this existing route. Each month's operation is bound to bring to us much valuable experience. If we attempt to expand too rapidly we may fail. If we expand slowly, we are more certain to succeed.

Stromberg Aviation Carburetors

Stromberg Carburetors, manufactured by the Stromberg Motor Devices Co., of Chicago were used on the D12 Special engines in the Navy-Curtiss planes which won the first and second place in the Pulitzer Trophy Race and on the Wright 700 hp. engines in the Navy-Wright planes which came in third and fourth as well as the two Army-Curtiss planes which finished fifth and sixth.

Perhaps the most distinctive element of design of these carburetors is the arrangement of the float mechanism with respect to the fuel jets, in order that inclinations or change of position of the airplane will not affect the mixture proportion or feed of fuel to the jets. In the NAU6T carburetor the carburetor float is of short cylinder or drum shape, located between the carburetor barrels, the axis of the cylinder being in lateral line with the two fuel jets. At all positions of the airplane the fuel levels stands at the center of the cylindrical float and consequently in constant relation to the fuel jets. In the NAY5 carburetor used in the Curtiss engine, where less room is available in the Vee, there are two floats, one ahead and one to the rear of the carburetor barrels, connected to a common lever mechanism. When the airplane is inclined, the fuel level rises on one float but falls on the other though keeping a constant relation to the fuel jets between.

In both these models a single fuel metering jet is used for each carburetor barrel, "compensation" being obtained by the well known "air bleed" principle. The fuel metering jet is located in the outlet from the float chamber and a small air duct is admitted to the fuel passage between the metering jet and the point of fuel discharge. Thus air in the form of tiny bubbles is drawn into the jet passage, resulting in the discharge of a finely atomized emulsion from the multiple jet openings. The air bubbles help lift the fuel column and overcome the retarding effect of surface tension so that a substantially constant mixture proportion is obtained.



On left, Stromberg NAU6T carburetor used on Wright T3 700 hp. engine—On right, Stromberg NAY5 carburetor used on Curtiss D12 Special 500 hp. engine.—Inserts show "air bleed" principle and its application

These carburetors are of rugged yet light construction with few but substantial parts. A special hard and non-corrosive alloy steel is used for the float valve, to obviate wear and consequent flooding or leakage. Friction dampers are used on the throttle shaft and altitude control shaft to minimize vibration and resulting wear. A special lever form of idle adjustment is provided for each carburetor barrel. The gasoline enters the carburetor through a brass gauze strainer of ample size and accessible location under the large square headed plug shown in the foreground of the photographs. In the NAY5 carburetor special means are employed for adjusting the mesh of the throttle gear sectors and sychronizing their openings. The altitude control is of the suction type, is smooth in operation and can be made of any range desired.

The Stromberg airplane carburetors have been developed after long research and experiment in the laboratory and in actual flight. The jet characteristics have been worked out to give a very economical mixture in the cruising range along with the somewhat richer mixture necessary for full power. An "accelerating well" is incorporated in the jet structure so that the throttle may be opened even when the engine is cold without danger of stalling or backfiring. A priming device is incorporated in the construction of the carburetors, giving an extra rich fuel charge each time the engine is turned over with the throttle shut.

Stromberg carburetors of the same general type were used by Lieut. J. A. Macready in making the American altitude record, and are also now in service on the 300 hp. Packard engines of the airship Shenandoah (ex-ZR1).

Moonlight Passenger Flights

The Mid-West Airways Corporation of Monmouth, Ill., has added passenger carrying on moonlight nights to its commercial activities. On Sept. 25, John Livingston made several moonlight flights with passengers, among them a woman, from the corporation's field at Monmouth. The plane has been decorated with colored lights operated from a storage battery. The ship made a considerable impression upon Monmouth residents many of whom were attracted to the field, which was well lighted with flares.

AIRPORTS AND AIRWAYS

This Department is concerned with all civil flying activities such as the establishment of airports, the marking of airways, warnings to airmen regarding obstructions, experiences gathered on flying routes and landing fields, the work of commercial aviation companies and private fliers, the formation of new air transport enterprises, personal paragraphs of general interest, etc.

Communications to this effect, addressed "Airways Editor, Aviation, 225 Fourth Ave., New York City", should be brief, accurate and to the point. They should deal with facts, not with theories or speculations. While American civil flying activities will naturally be given prominence, communications will also be welcomed from Canada, Mexico and other parts of the Western Hemisphere. EDITOR.

Kansas City News

Activities at Richards Field, Kansas City, Mo. the past weeks have been fast and furious, due mostly to the men getting their planes ready to go to the races at St. Louis. Many ships from Texas, Kansas, and Oklahoma checked through headed that way and other points east. The biggest number belonged to the Army, and of these many officers were prevailed upon to stop over and talk to the Reserve Officers of the Air Service at their luncheons. Maj. H. M. Hickam, Capt. F. Pratt, Colonel Howard of Kelly Field and others were presented and made talks.

The Kansas City Air Service Reserve Officers' Demonstration, held Oct. 7 and 8, at Richards Field was well attended, many thousands seeing a Blimp for the first time. The TC3, from Scott Field was really the star of the meet. Maj. John Paegelow in command and Lt. W. C. Farnum, a K. C. man as pilot received a warm welcome from their K. C. friends. Other members of the crew were Capt. F. H. Pratt, Lts. F. M. McKee, A. Thomas and two enlisted men.

Gen. M. M. Patrick arrived early in the day with his two star pennant flying on the rear of his black and gold DH and after looking the meet over took off for Ft. Leavenworth, Kan.

The Demonstration included a boys' model airplane contest, formation flying, a flight of two ships tied together with a 100 ft. rope, take off and landing included, parachute drops, anti-aircraft and bombing demonstrations and war maneuvers and aerobatics.

A total of about fifty planes were on the field before the day (Sunday) was over, of which the majority were of the Army, but there also were a number of commercial planes; some from Topeka, Kan., the home of the Longrens, Omaha, Neb., by two new Lincoln Standards of the 4 passenger and pilot type, and some others from fields near by. The Air Service fields represented were, Scott, Kelly, Crissy, Langley, and Fort Riley.

Col. J. H. Howard and his squadron of twelve MB3 remained on the field for several days to work out aerial maneuvers with the staff school of Ft. Leavenworth, using Richards Field as their base.

The Air Service Reserve Officers of Kansas City gave this meet and demonstrations as a manifestation of what the reserves of Kansas City are doing to promote the interest in aviation in and around the City and to help to make "Kansas City, the Air Center of the U. S. A., one daylight hop to any part of the country."

Italian Air Line

An air transport syndicate has been formed called the "Aero Express," with a capital of ten million lire. This syndicate, which includes some important financiers among its members, is at present negotiating with the Italian Government for the inauguration of an air service from Italy to Constantinople, via Greece.

New Zealand Activities

Civil aviation companies in New Zealand during 1922 carried 2189 passengers, flew a total of 200 hr. and covered approximately 14,983 mi.

Civil Aviation in Honduras

The National Congress of the Republic of Honduras has formally approved a Presidential Decree granting to Messrs. Marco A. Fortin and Bernardo Appel a concession for the importation, free from all duties, of airplanes and airplane equipment, for use in commercial operation in the Republic. The free use of the governmental hangar at Toncantin is granted to the concessionaires, and also other hangars in the country belonging to the government, provided the use of them in no way impairs the government service. The concessionaires also have the right to occupy public land, not exceeding a hectares in each plot. They may use the timber cut from this land.

When the operations are perfect, the concessionaires are obliged to carry the mails under equal conditions and for the same price as it is carried at the present time overland and to give a discount of 10 per cent on all fares charged for flights made by officials and employes of the executive and legislative branches of the government, as also by the magistrates of the court. The concession may not be transferred to any foreign government or foreign public service corporation. The concessionaires are exempt from all taxes and imports for the use of government hangars and the land used for landing fields. In order to live up to the concession, the concessionaires must, within two years from Jan. 23, 1923, have in operation two or three machines with pilots and necessary mechanicians and begin to render the service as indicated.

Air Lines Combining in Europe

The tendency among aerial transport companies in northern Europe at the present time is clearly in the direction of combinations, both within the several countries and internationally, for the purpose of reducing operating expenses by the elimination of overhead charges. There has been more or less cooperation between the companies in the several countries for some time in the matter of services and the present movement is the result of economic necessity for while there has been a large increase in the use of airplanes both for passengers and freight services, including mails, this increase has been obtained largely as a result of the reduction of charges for the various services and the net earnings of the several companies have not been such as to place the various concerns on a sound financial basis. Practically all of them are operating only by government assistance and in most cases even with this help the concerns are not successful financially. Practically all of the companies are now receiving government subsidies in one form or another spread over several years.

British Civil Aviation

Some interesting remarks were made by Sir Samuel Instone, Chairman of the Instone Air Line, Ltd., at the annual general meeting of the company held in London on June 5.

During the year under review the number of flights made by machines of this company was 1,062; the number of miles flown 261,970, and the number of passengers carried 8,244. The amount of fares earned, *excluding* subsidy, was £21,683, and the amount of subsidy earned £38,789/12s./9d. excluding compensation. The company operated four modern airplanes and had a reserve fleet of four airplanes.

U. S. ARMY AND NAVY AIR FORCES

U. S. ARMY AIR SERVICE

Army Orders

Capt. Frank W. Wright, A.S., upon expiration of his present leave of absence, will report in person to the commanding general Ninth Corps Area for temporary duty pending the departure of the transport scheduled to leave that port on or about Nov. 1, 1923, for New York City, will sail on that transport, and upon arrival will proceed to Washington, D. C., and report in person to the Chief of Air Service for duty in his office.

First Lieut. Arthur W. Brock, jr., A.S., from Air Service Engineering School, McCook Field, Dayton, Ohio, Engineering Division, McCook Field, for duty.

Second Lieut. Thomas R. Howard, A.S. (Infantry), is relieved from detail in the Air Service and assigned to the Second Division, Infantry.

Maj. Albert L. Sneed, A.S., from Office C.A.S., Washington, Oct. 10, to A.S. Tactical School, Langley Field, for instruction.

Capt. Edwin B. Lyon, A.S., from Hq., First Corps Area, Boston, Oct. 10, to A.S. Tactical School, Langley Field, for instruction.

Sec. Lieut. Louis M. Merrick, A.S., from Brooks Field, to A.S., Hawaiian Dept., Honolulu, on transport leaving San Francisco Jan. 15 next.

Sec. Lieut. Richard George Herd, A.S.O.R.C., 2996 Bailey Ave., Buffalo, to A.S. Primary Flying School, Brooks Field, for 4 months instruction.

Capt. Garth B. Haddock and First Lieuts. Roger S. McCulloch and James M. G. T. Neely, A.S., from present duties, Scott Field, to Balloon and Airship School, that station, for instruction.

First Lieut. Dudley Miller Outcalt, A.S.O.R.C., McCook Field, to temporary active duty with 15th Obs. Sq., that station.

First Lieut. William Bryan Robertson, A.S.O.R.C., Bridgeton, Mo., to temporary active duty with 15th Obs. Sq. St. Louis Field.

Sec. Lieut. Edward Henry Holterman, A.S.O.R.C., Mitchel Field, to temporary active duty with 15th Obs. Sq., that station.

Seven days' leave of absence to First. Lieut. James B. Jordan, A.S.

First Lieut. Dudley E. Rowland, A.S., from Mitchel Field, to A.S., Panama Canal Dept., C. Z., on transport leaving New York Nov. 28.

Two months' sick leave to Maj. William H. Garrison, jr. A.S. from Friedrichshafen, Germany.

Maj. Frank M. Kennedy, A.S., to return to U. S. on rigid airship being constructed for U. S. Govt. by Zeppelin Co.

So much of par. 21, Special Orders, No. 37, Feb. 13, 1923, War Department, as assigns Capt. Frank W. Wright, A.S., to duty at Crissy Field, Calif., effective upon completion of his present tour of foreign service is revoked.

Observation Training at Kelly Field

A special course of training in observation, of five weeks' duration, began in the Tenth School Group at Kelly Field, Tex., on Monday, Aug. 27. This course is for the benefit of those officers from Lighter-than-air who are to be sent on foreign duty to serve with Heavier-than-air detachments, and also for those officers at the Air Service Advanced Flying School who are awaiting transfer to other branches of the Army and who have not received any specialized training in the Air Service. The following named officers are taking this course: Capts. H. C. Gray and H. V. Hopkins, 1st Lieuts. J. W. Benson, C. M. Brown, A. J. Etheridge, F. W. Evans, J. D. Jordan, P. Schneeberger, E. L. Fernsten, R. J. Ignico, E. S. Moon, 2nd Lieuts. W. B. Goddard, W. S. Lawton, E. C. Lynch, R. A. Peterson and F. J. Woods.

The students now taking the regular course at the Air Service Advanced Flying School are acting as pilots for the above named officers on all missions.

Aerial Target Practice

Fort Monroe, Va., anti-aircraft gunners recently shot to pieces three target planes 5,000 ft. in the air. The planes were towed by regular army machines at the end of ropes 500 yd. long. There were five towing planes and an equal number of targets, but the gunners destroyed only three of the captive flying craft.

The target planes were brought under the gaze of the gunners at the fort with anti-aircraft searchlights. The towing plane was not visible at all to the gunners.

Army officers said the experiments, while successful, were the most dangerous ever undertaken by the Air Service, as the least miscalculation might result in a tragedy. Should the gunners by any chance throw the rays of the searchlight on the towing machine instead of the plane being towed it would mean almost certain death to the pilot fliers.

Hundreds of persons at Willoughby Beach and Old Point Comfort witnessed the aerial bombardment and experienced the thrill of seeing shells burst 5,000 ft. over their heads.

Mapping the Airways in the Southwest

Kelly Field, although greatly handicapped for lack of personnel, is making every effort to expedite the various airways logs throughout that part of the Southwest. Practically all have been completed and the remaining flights are in progress and will no doubt be ready for forwarding within a brief space of time. Questionnaires have been prepared and forwarded to the various cities throughout Texas calling on the local Chamber of Commerce, Rotary Club and other similar organizations for information on emergency landing field facilities. Texas is enthusiastic and lends its cooperation to practically all Army projects.

Value of the A. S. as a Cooperative Agency

From all indications the ground troops are realizing the benefit of aerial observation, surveillance and other advantages derived from airplanes in conjunction with their own branch. Numerous requests are received at Kelly Field for planes to cooperate in maneuvers, and in practically every case pleasing results are obtained. Every effort is put forth not only by Kelly Field, but also by its pilots and observers, to make such problems a success, and the results have been well worth it.

Sergeant Cited for Heroism

Sergt. Roger C. Schenck, 8th Att. Sq. (now with the 90th Att. Sq.), Air Service, has been commended for heroism following the crashing of an airplane, piloted by Lieut. Park Holland, A.S., at Kerrville, Tex., Oct. 8, 1922. Sergeant Schenck, who was also in the plane, although severely injured, rescued the unconscious pilot from the burning wreckage. Sergeant Schenck's home is in New Orleans.

Ordnance Reserve Officers Make Flights

An Ordnance Reserve Officers' Training Corps Unit was encamped at the Aberdeen Proving Grounds, Md., for six weeks, from the middle of June until the end of July. Most of those who desired were taken on airplane flights about the post. Some of the officers seemed to take a special liking to flying and came back for a second and even a third flight, and some expressed a desire to be transferred to an Air Service R.O.T.C. unit for next year's training.

A Long Journey Through the Air

What is probably one of the longest airplane trips on record started on Sept. 1, when Lieuts. Victor E. Bertrandias and Kenneth Garrett left Mitchel Field, L. I., N. Y., for Seattle, Wash., San Francisco, and a stop on the return trip at St. Louis, where Lieutenant Bertrandias was an alternate in Event No. 3 of the Pulitzer Races. When the plane returns to Mitchel Field it will have covered approximately 6300 mi.

While enroute the pilots will locate and map landing fields for future reference. This information will be particularly valuable between Chicago and Seattle, as to date there has been very little aviation activity in the Northwest.

U. S. NAVAL AVIATION

New Type of F5L Flying Boat

In an effort to give the F5L type of seaplane a quicker take-off from the water, the step on one of these planes at the Naval Air Station at Hampton Roads has been moved 24 in. aft of its original position. A series of competitive tests at that station have been held between the F5L with the step in the new position and two standard F5L's. It is hoped that these tests will show definitely the value of the change, not only in quicker take-off, but also in maneuverability on the water.

U.S.S. Milwaukee

The U.S.S. Milwaukee, the scout cruiser that is at present cruising in the Pacific, has sent in a very interesting report of the activities of the planes attached to the ship during the cruise.

A flight was made at Pago Pago, Samoa, in order to take photographs. This was the first flying ever done at Tuitila and created much interest. The natives showed a mixture of wonder, fear and exhaltation when the flight commenced. The flight lasted about 30 min.

Scouting Fleet Planes Have War Game

Planes of the Aircraft Squadrons Scouting Fleet, recently engaged in maneuvers off the New England coast, participated in a war game with units of the Fleet while there. The vessels were designated the "Black Fleet" and engaged in an attack on the coast, which was defended by the planes of the Aircraft Squadrons. Radio signals from the enemy flagship intercepted by the radio compass on a plane of VF Squadron One, disclosed her position and enabled the aircraft to locate and attack the enemy in the vicinity of Cape Cod. The units of the Aircraft Squadrons are now at the Naval Air Station at Hampton, Roads, Va.

The recent operations of the planes off the New England coast has done much to increase the efficiency of the units and has shown the value of sea-going aircraft.

Marine Planes in Virginia

The Marine aviation units attached to the ground troops operating in field maneuvers in Virginia have been continuing work under war-time conditions. The city of Staunton, Va., was recently attacked by planes. A formation of fighting planes to clear the air of all enemy aircraft was followed by two formations of observation and bombing planes. The city was theoretically destroyed. After the aerial "bombardment" an exhibition of stunt flying was given over the city for the benefit of the "survivors." It is reported that 119 men as replacements and 3000 lb. of military stores were transported by planes during the week of the attack on Staunton.

Night Flying at Hampton Roads

Several pilots of the aircraft carrier Langley, now at Hampton Roads, Va., have been practicing night flying at the Naval Air Station there. On the nights of Sept. 24, 25 and 26 a total of six flights were made in an Aeromarine landplane. The field was lighted by four flood lights and one searchlight. The pilots participating were Lieut. Comdr. V. C. Griffin, Lieutenants Dillon, Rhodes and Pride, and Boatswain Feher.

Parachutes Tested before Distribution

The plans of the Naval Bureau of Aeronautics to furnish the latest design in parachutes, in adequate numbers, to the aviation forces in the Navy is progressing satisfactorily. Five hundred fifty parachutes have been ordered from the Army and are being made by the Irving Airchute Co. of Buffalo. About 100 have already been delivered to the Naval Aircraft Factory for inspection. They are being tested at the Naval Air Station at Lakehurst, N. J., by the Navy men who studied parachute work at McCook Field last summer. Distribution of these parachutes will be made in the near future.

Of the 550 parachutes ordered, 275 are of the seat pack type, 225 of the lap pack type, and 50 of the training type.

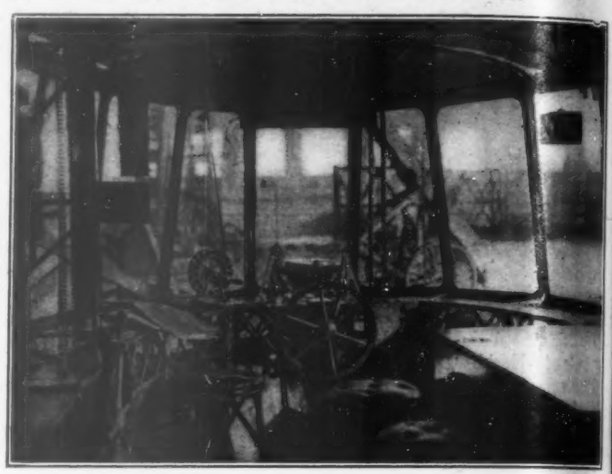


Photo Kadel & Herbert

Control station of the U. S. naval airship Shenandoah, formerly the ZR1

The last is a double parachute used by students. The parachutes manufactured by this company are of a design with which 1500 consecutive drops have been made without one failure. About 25 parachutes a week are being tested at Lakehurst.

Pacific and Caribbean Planes Reunion

Twenty Navy planes were present at the American Legion Convention at San Francisco on Oct. 15 to 19. Two of these planes are from the Marine Flying Fields at Port au Prince Haiti, and Santo Domingo City, D. R. Piloted by Lieuts. F. O. Rogers and H. D. Palmer, of the Marines, these planes will have covered a distance of approximately 8000 mi. upon their return to Haiti. This is equal to one third of the distance around the world at the equator.

The two planes were present at the Air Meet at St. Louis, and left there for San Francisco on Oct. 8. The presence of these planes at San Francisco, together with eighteen planes from the Aircraft Squadrons Battle Fleet, under the command of Capt. A. W. Marshall, U.S.N., brought together on the west coast Navy aircraft from two of the most widely separated aviation forces in the Navy.

Hampton Roads Plane Brings Assistance

The Naval Air Station at Hampton Roads, Va., received a radio message at 10.45 a. m. on Oct. 3 that a woman was seriously ill at Cape Hatteras Village, 130 mi. distant. An F5L with Lieut. (jg) G. Varini as pilot and with Lieut. A. C. Smith, (M.C.), flight surgeon, as passenger, made the flight and returned to the station at 5.15 p. m. with the patient, Mrs. J. O'Neil and a small son, who were taken in an ambulance to the Protestant Hospital at Norfolk, Va.

Non-Rigid C7 at Hampton Roads

The non-rigid airship C7, stationed at the Naval Air Station at Hampton Roads, Va. made five flights at the station during the week ending Sept. 28. On one of these flights twenty four intermediate landings were made for the purpose of training lighter-than-air pilots. The total flying time for the five flights of the C7 was 7 hr. and 17 min.

Schneider Cup Team Returns

The four Navy pilots who comprise the American team which won the Schneider Cup Race sailed for home on the S.S. Leviathan on Oct. 9. They brought with them the Schneider

Lieut. David Rittenhouse, who won the Schneider Cup in a Navy-Curtiss seaplane, with a speed of 177.38 mi./hr.

Cup Seaplane Trophy, the highest prize in the world of aeronautics for sea-going aviation. The team consists of Lieuts. F. W. Wead, in charge, David Rittenhouse, winner, Rutledge Irvine, second, and A. W. Gorton, all U. S. Navy.

Torpedo Planes Work With Submarines

Division Three, VT Squadron Two, stationed at the Naval Air Station at Pearl Harbor, Hawaii, has been engaged in spotting torpedo runs for the submarines at Pearl Harbor. One plane has been sent out each morning to work with the submarines which have been firing on the outer range. The use of the planes in spotting work has resulted in a marked increase in the effectiveness of the torpedo runs by the submarines. Besides this work, the planes have been engaged in locating possible landing sites on the Coast of Oahu. Aerial photographs of these sites were taken for reference.

Fire Drill at Lakehurst

A very realistic fire effect was made at the Naval Air Station at Lakehurst, N. J. by setting off two smoke bombs and ringing the fire alarm. Everyone thought at first that the east group of barracks were burning. The fire drill was gone through with great expedition and without panic. The fire fighters arrived at the scene of the supposed blaze in record time, and were relieved to discover the real nature of the alarm. The quick and business-like response of the men on the station to the alarm is a matter of much satisfaction to the officers of the station.

Aircraft Squadrons Commended

The following letters have been received by the Commander Aircraft Squadrons Scouting Fleet from the Chairman of the Municipal Air Board at Boston, and the Vice President of the National Aeronautic Association, commenting on the showing of the Navy aircraft at the opening of the Boston Air Port on Sept. 5.

"My dear Captain Gherardi:
On behalf of the City of Boston and of the general committee in charge, I desire to extend to you and the officers and men of the Aircraft Squadrons our very deep and sincere appreciation for all that you did to make the opening of the Boston Air Port a success. I very fully realize that without the cooperation and assistance of the Navy Department, and particularly your own efforts, the Boston Air Port opening would have been a failure, and that due to the wonderful work of the Navy, it was the most successful thing of its kind ever held in New England. I especially appreciate the work done by the Navy, not only in line of duty, but the spirit of cooperation and cheerful help which was given by each and every man of your command.
With kindest personal regards, I am,
Gratefully yours,
Porter Adams,
Chairman, Municipal Board."

"My dear Captain:
May I extend the congratulations of the National Aeronautic Association to the officers and men of the Wright on the wonderful demonstration of flying given during the opening of the Boston Air Port? This remarkable exhibition of flying will go far in educating the people of Boston to the ever-increasing importance of aeronautics, and was particularly demonstrative of the possibilities of flying under proper regulations.
I also want to thank you for the courtesy extended me during my visit to the Wright.
Very sincerely yours,
National Aeronautic Association,
by B. H. Mulvihill, Vice President."

Captain Gherardi, commenting on the work of his command during the opening of the Boston Air Port, states:

"In view of the success attending the opening of the Boston Air Port and the interest taken by the people of New England and the press, together with the opportunity afforded to cement relations with the civilian officials in charge of aeronautics in New England, it is felt that the Navy was well benefitted by the attendance of the Aircraft Squadrons. It is also believed that the interest of the Reserve Naval aviators was stimulated and the policy of the Bureau in this connection furthered."

ZR1 Visits Nation's Capital

The Navy rigid airship ZR1 made a successful flight to Washington on Sept. 22. President Coolidge, who was at lunch when the ship came within sight of the White House, left the table and hastened outdoors to look at the ship. On its flight from Lakehurst, the ZR1 passed over Philadelphia, Chester, Wilmington and Baltimore and reached the capital city at 1.30 p. m. There, it circled the Capitol dome and flew over the downtown section, afterward passing over the Lincoln Memorial and the National Cemetery at Arlington where a wreath was dropped on the unknown soldier's grave. The ship then headed for its station at Lakehurst, arriving there about sundown.

Captain Marshall Soloes on West Coast

Capt. A. W. Marshall, Commander Aircraft Squadrons Battle Fleet on the Pacific, recently qualified as a pilot, and is doing a considerable amount of flying. This adds another name to the list of the older officers of the Navy who have entered into the practical science of flying with the enthusiasm of young officers just graduated. This training enables these officers to grasp the problems of their fliers with the greatest understanding, and does much to increase the spirit of cooperation and the morale of the fliers on the different stations.

The older officers of the Navy have recognized the value of aviation as part of the Fleet, and the example of Captain Marshall shows that their interest is more than casual.

San Diego Air Station Gives Ball

A ball given by the officers of the Naval Air Station at San Diego, Calif. in honor of Rear Admiral and Mrs. A. H. Robertson, in the station gymnasium on Friday night, Sept. 21, was a brilliant and successful social affair, attended by practically all Navy, Marine and Army officers and their families stationed at San Diego. Admiral Robertson is Commandant of the 11th Naval District, with headquarters at San Diego.

Orders to Officers

Lieut. Comdr. Zachary Lansdowne, detached Assistant Naval Attaché American Embassy, Berlin, Germany, 10-15-23 to Naval Air Station, Lakehurst, N. J.

Lieut. Linton Herndon, detached office of General Inspector of Naval Aircraft, Eastern District, Garden City, L. I., N. Y. to works of Glenn L. Martin Co., Cleveland, Ohio.

Lieut. (jg) James E. Hamilton, detached Naval Air Station, Pensacola, to U.S.S. Henderson.

Lieut. (jg) Roland E. Killian, detached Naval Air Station, Pensacola, to U.S.S. Orion.

Lieut. (jg) Maurice Van Cleave, detached Naval Air Station, Pensacola, to U.S.S. Henderson.

Lieut. Charles V. Ellis, (ChC) detached Recruiting Barracks Hampton Roads to Naval Air Station, Pensacola.

Lieut. Harry E. Groos, SC., detached Receiving Ship New York to U.S.S. Langley as assistant for disbursing and assistant to supply officer.

Lieut. Webster Gross, SC., detached U.S.S. Langley, to course instruction Supply Corps School of Application, Washington, D. C.

Lieut. Frederick W. Pennoyer, CC., detached Naval Air Station, Pensacola, Fla., to U.S.S. Langley.

Lieut. Arthur H. Radford, detached Bureau of Aeronautics, to Aircraft Squadrons Battle Fleet.

Lieut. John C. Rickertts, detached command U.S.S. Curlew, to Naval Air Station, Coco Solo, C. Z.

Lieut. (jg) Jackson R. Tate, detached Aircraft Squadrons Scouting Fleet, to U.S.S. Langley.

Bosn. Walter J. Daly, detached U.S.S. Langley, to Aircraft Squadrons Scouting Fleet.

Mach. Murphy Lott, detached Naval Air Station, San Diego, to U.S.S. New Mexico.

West Coast Planes in Battle Practice

Planes of the Aircraft Squadrons Battle Fleet stationed at San Diego, Calif. conducted a war game with the U.S.S. California, upon its recent arrival at San Pedro. The U.S.S. California was protected by two squadrons of observation planes and one squadron of fighting planes. They, with the battleship, were designated the "Blue Force," and were attacked by the "Red Force," consisting of one torpedo plane squadron and one fighting plane squadron. The mission of the attacking planes was to launch attacks of torpedoes against the California. A smoke screen was laid by DT planes to cover the attacking planes. The Commander, Aircraft Squadrons Battle Fleet, observed the operations from one of the attacking torpedo planes. The defending units were VO Squadrons One and Two, with VF Squadron One. The attack was made by VF Squadron Two and VT Squadron Two.

Navy Day, Oct. 27

Navy Day, Oct. 27, inaugurated by the Navy League, will have its second celebration this year. Oct. 27 is also the birthday of President Theodore Roosevelt, who was one of the best friends the Navy ever had. The Navy is cooperating with the Navy League to the end that this day may be properly celebrated in the interest of an adequate Navy, and in memory of one who made this aim a cardinal principle.

The U.S.S. Wright, aircraft tender for the Aircraft Squadrons Scouting Fleet, will go to Charleston, S. C., for Navy Day. Planes will be sent from there to Savannah, Ga., and return, as part of the Navy Day activities of the Navy in the South Atlantic States. Flying exercises will be held from the Wright by the planes based on the ship while at Charleston, for the benefit of the people of that city.

Corry Field, Fla., Being Conditioned

Corry Field, Pensacola, Fla., is being prepared for use by the personnel of the Naval Air Station at Pensacola. This field when completed will be used by Navy fliers and also by commercial planes. It will be a very valuable addition to the flying fields in the Gulf of Mexico coast region. The natural drainage of the field, together with the sandy loam surface, will make this an excellent field for landing in all weather conditions. The care-taking detail now at the field reports that considerable difficulty has been experienced with cows getting in the way of planes while landing.

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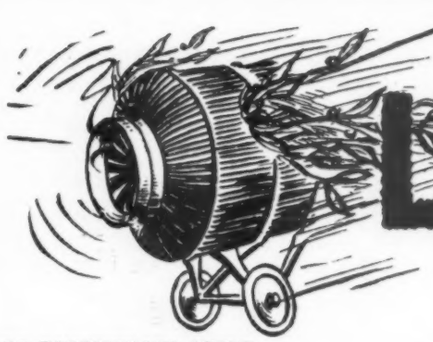

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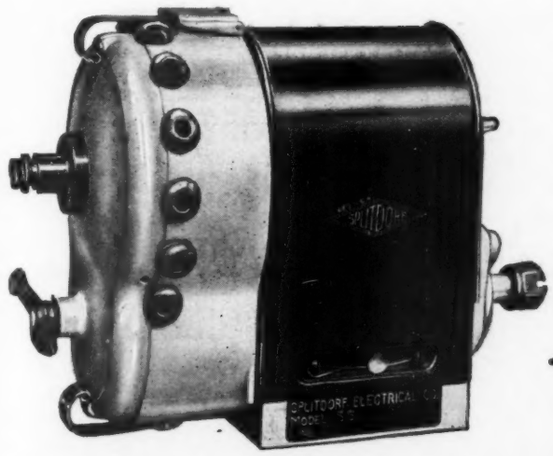

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